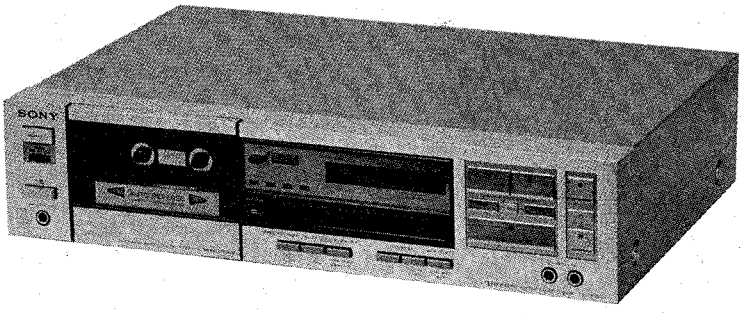
TC-FX505R

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model



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SPECIFICATIONS

Tape Transport Mechanism Type	TCM-130R7

Recording system 4-track 2-channel stereo
Fast-forward and rewind time
Approx. 100 sec. (with C-60 cassette)
Bias frequency 105 kHz
Signal-to-noise ratio (NAB, at peak level)

Cassette \ Dolby NR switch	OFF	B-TYPE ON	C-TYPE ON
TYPE IV (Sony METALLIC)	58 dB	65 dB	71 dB
TYPE III (Sony FeCr)	59 dB	66 dB	72 dB
TYPE II (Sony UCX)	56 dB	63 dB	69 dB
TYPE I (Sony BHF or HFX)	54 dB	61 dB	67 dB

Total harmonic distortion
1.0% (with Sony METALLIC and FeCr cassettes)
Frequency response DOLBY NR OFF
- With TYPE IV cassette (Sony METALLIC)
  20 – 18,000 Hz
  30 – 17,000 Hz (±3 dB) (DIN)
  30 – 13,000 Hz (±3 dB, 0 VU recording)
- With TYPE III cassette (Sony FeCr)
  20 – 18,000 Hz
  30 – 17,000 Hz (±3 dB) (DIN)
- With TYPE II cassette (Sony UCX)
  20 – 18,000 Hz
  30 – 17,000 Hz (±3 dB) (DIN)
- With TYPE I cassette (Sony BHF or HFX)
  20 – 16,000 Hz
  30 – 15,000 Hz (DIN)

Wow and flutter 0.05% WRMS (NAB)
±0.14 % (DIN)
Inputs
Microphone inputs (phone jacks)
Sensitivity 0.25 mV (–70 dB)
For a low-impedance microphone
Line inputs (phono jacks)
Sensitivity 77.5 mV (–20 dB)
Input impedance 47 k ohms
Outputs
Line outputs (phono jacks)
Output level 0.44 V (–5 dB) at load impedance 47 k ohms
Load impedance over 10 k ohms
Headphone output
Output level –28 dB at a load impedance of 8 ohms

0 dB = 0.775 V

— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MICROFILM

STEREO CASSETTE DECK

SONY®

TC

General

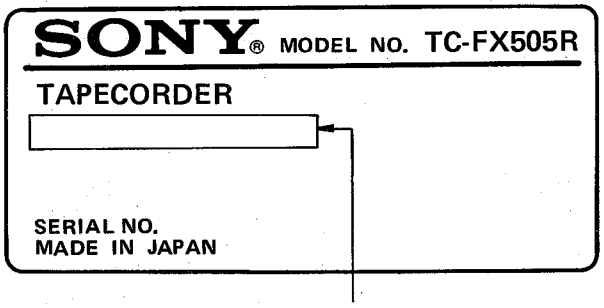
Power requirements	US, Canadian Model: 120 V ac, 60 Hz AEP Model: 220 V ac, 50/60 Hz (240 V ac adjustable by authorized Sony personnel) UK Model: 240 V ac, 50/60 Hz (220 V ac adjustable by authorized Sony personnel) E Model: 110, 120, 220 or 240 V ac adjustable, 50/60 Hz
Power consumption	14 watts
Dimensions	Approx. 430 x 105 x 275 mm (w/h/d) (17 x 4¼ x 10⅞ inches) including projecting parts and controls
Weight	Approx. 4.6 kg (10 lbs 3 oz)

Note

Appliance conforms with EEC Directive 76/889 regarding interference suppression.

MODEL IDENTIFICATION

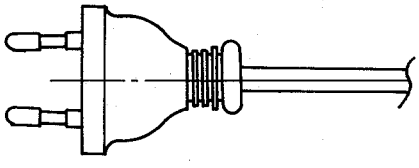
– Specification Label –



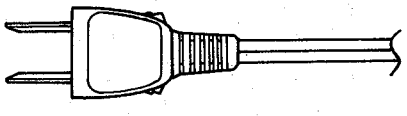
US, Canadian model: AC: 120 V 60 Hz 14 W
AEP model: AC: 220 V ~50/60 Hz 14 W
UK model: AC: 240 V ~50/60 Hz 14 W
E model: AC: 110, 120, 220, 240 V ~50/60 Hz 14 W

– Power Cord –

E1 Model
Euro-plug
1-555-734-00



E2 Model
Parallel-blade plug
1-551-472-00



FEATURES

Auto-reverse playback with roto-bilateral record/playback head
Continuous playback of both sides of the cassette is possible without turning the cassette round. When the tape reaches its end, the roto-bilateral record/playback head reverses position and the other side will be played back automatically. The side being played back can be changed instantly during playback, by simply pressing the forward or reverse play button. The ▶ or ◀ indicator shows the playback direction.
The roto-bilateral head assures the same performance characteristics either tape transport direction.

LaserAmorphous head
The record/playback head is made of a special amorphous magnetic alloy developed by Sony, and its cores are solidly welded by laser. This highly-durable head provides a wider dynamic range and a more extended frequency response, especially in the high-frequency range. The head is designed to take full advantage of the potential of the metal tapes.

Blank skip function
Blank spaces of more than 10 seconds long can be skipped in either fast-forward or fast-reverse mode and only the recorded portions of the tape played back.

Music scan function
Only the first 10 seconds or so of all the selections on a tape can be played back in sequence. Thus the particular selection can be located easily.

Cycle play
Both sides of the cassette can be played back five times in succession.

C-type Dolby NR (noise reduction) system
In addition to the conventional B-type Dolby NR system, this cassette deck employs the newly-developed C-type Dolby NR system which reduces tape noise twice as effectively as the B-type system. The C-type system also incorporates an anti-saturation network to improve the high-frequency dynamic range by 4 dB at 10 kHz.

Automatic tape select system
The tape type is automatically detected and the recorder is adjusted to its optimum bias current for recording and the optimum equalization for both recording and playback by simply inserting the cassette in the cassette holder.

The AMS (Automatic Music Sensor) system
Using this system, it is possible to locate the beginning of the selection being played or the following selection. The AMS searches either forward or in reverse for the blank space between selections. Playback will begin automatically from the beginning of the selection.

Remote control operation
Using the optional RM-70 remote control unit, various operations—recording, playback, AMS, record muting operation, etc.—can be remotely controlled.
When the RM-65 synchro remote control unit is used to connect this cassette deck with a turntable equipped with a synchro remote control jack, the operation of the cassette deck and the turntable will be synchronized.

SERVICING NOTE

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

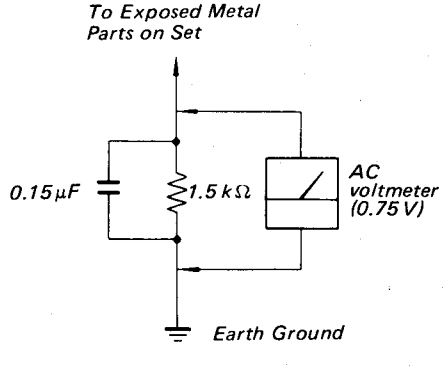


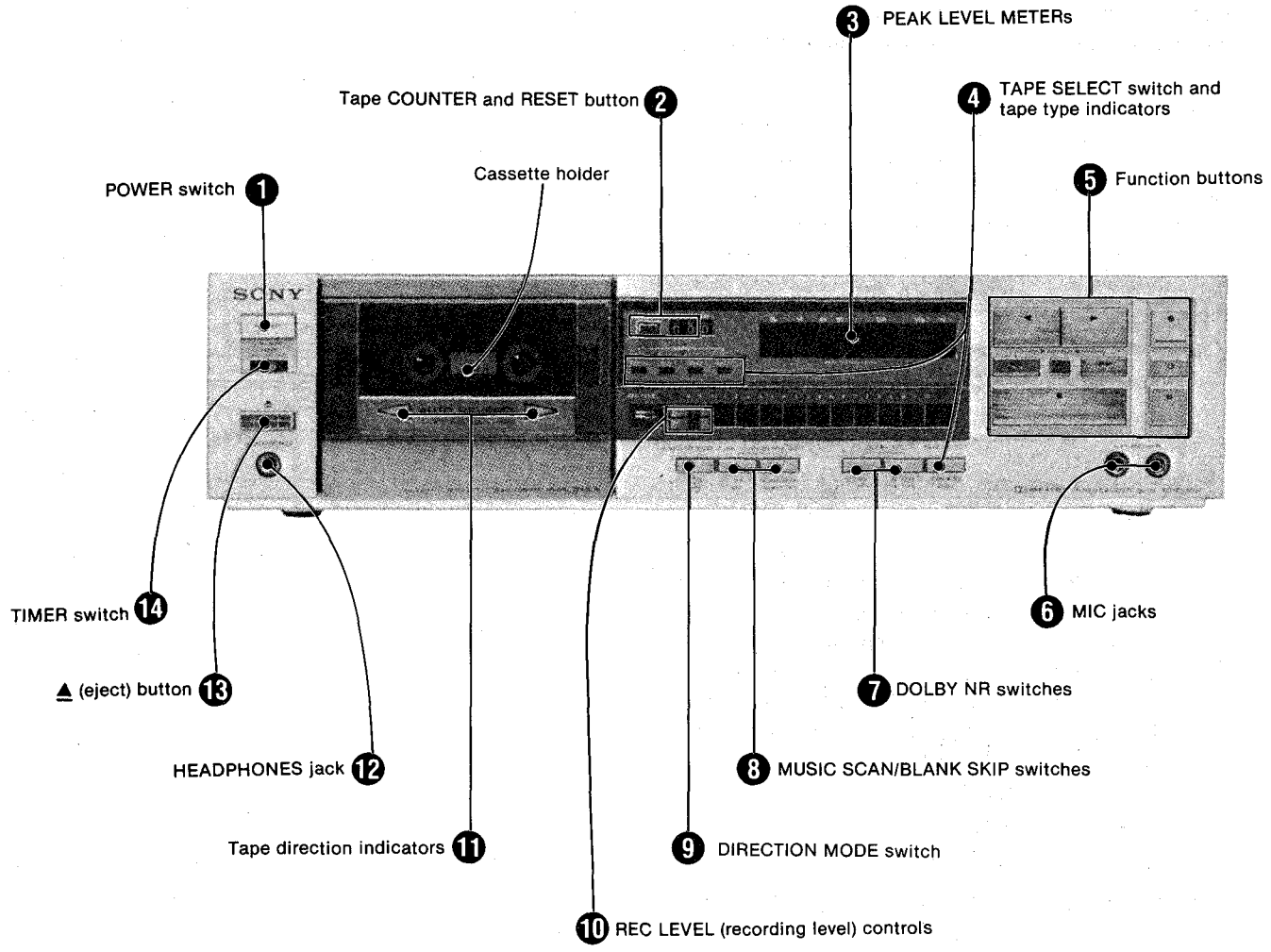
Fig. A. Using an AC voltmeter to check AC leakage.

NOTES ON REPAIR

When the mechanism is operated with the set in an upside-down position, misoperation may result. For repair while operating the mechanism, perform with the set in its normal position or standing on its side.

FUNCTION OF CONTROLS

The numbers in the photo are keyed to the following explanations.


3 PEAK LEVEL METERs
Tape COUNTER and RESET button 2
4 TAPE SELECT switch and tape type indicators
POWER switch 1
Cassette holder
5 Function buttons
TIMER switch 14
6 MIC jacks
▲ (eject) button 13
7 DOLBY NR switches
HEADPHONES jack 12
8 MUSIC SCAN/BLANK SKIP switches
Tape direction indicators 11
9 DIRECTION MODE switch
10 REC LEVEL (recording level) controls

❶ POWER switch
This turns the power on or off. The peak level meters illuminate when the unit is turned on.

❷ Tape COUNTER and RESET button
The tape counter provides a numerical reference point while recording which can be used to index a recorded cassette. To reset to zero, press the RESET button.

❸ PEAK LEVEL METERs
These meters show the peak input level of each channel during recording, and recorded levels in the playback mode. They follow the transient peaks of high-level inputs that are too brief to be followed by conventional VU meters so that the optimum recording level can be accurately set.

❹ TAPE SELECT switch and tape type indicators
Generally set this switch to AUTO (⊓). The automatic tape select system will then operate. When using a TYPE III (Fe-Cr) cassette or a TYPE IV (METAL) cassette which has no METAL tape detector slots, depress this switch to set it to the TYPE III (IV) position (⊓̲). When inserting a cassette, one of the tape type indicators will light up depending on the type of tape and the position of the TAPE SELECT switch.

❺ Function buttons
It is possible to switch directly from one mode to another. The indicator lamps on the buttons light to show the operating mode (except the ◀◀, ▶▶ and ■ buttons).

◀ (reverse play) button : Press this button to play back the back side of the cassette. The tape is transported to the left.
▶ (forward) button : Press this button to play back the front side of the cassette. The tape is transported to the right. To record, press this button while holding the ● button down.
◀◀ (fast-reverse) button : Press this button to advance the tape rapidly to the left. This button is also used for "AMS" and "Auto play."
AMS button : Press this button and the ▶▶, or the ◀◀ button for AMS function.
▶▶ (fast-forward) button : Press this button to advance the tape repidly to the right. This button is also used for "AMS" and "Auto play".
■ (stop) button : To stop the tape, press this button.
● (record) button : Press this button together with the ▶ button to start recording. Also press this button before adjusting the recording level.
O (record muting) button : Press this button to eliminate unwanted material and to insert a blank space during recording.
❚❚ (pause) button : To pause for a moment during recording or playback, press this button. This button is also used to control more precisely the start of recording and to release the record muting mode.

❻ MIC jacks
Any low-impedance microphone equipped with a phone plug may be used. If your microphone is equipped with a mini plug, you will need a plug adaptor.

❼ DOLBY NR switches
The left switch turns the Dolby NR* (Noise Reduction) system on and off and the right switch selects either the B-type or C-type Dolby NR system.
To record with the Dolby NR process, depress the ON/OFF switch to the ON position and choose between B-TYPE (⊓) and C-TYPE (⊓̲).
To record without the Dolby NR process, press the ON/OFF switch again to release.
When playing back, set these switches to the same position used in recording.

❽ MUSIC SCAN/BLANK SKIP switches
The ON/OFF switch on the left actuates and switches off the music scan and blank skip functions and the switch on the right selects either the music scan function or the blank skip function.
Depress the left switch (⊓̲ ON) and the right switch (⊓̲ MUSIC SCAN) to scan the first 10 seconds of all the selections.
Depress the left switch (⊓̲ ON) and release the right switch (⊓ BLANK SKIP) to skip blank spaces representing more than 10 seconds, during playback.

❾ DIRECTION MODE switch
Depress this switch (⊓̲ ⟲) to play back both sides of the cassette five times in succession.
Press it again (⊓ ⇄) to stop playback at the end of the back side.

❿ REC LEVEL (recording level) controls
These controls adjust the recording level. The upper slide bar is for the left channel and the lower for the right channel.

⓫ Tape direction indicators
The ▶ (forward) indicator illuminates when the front side of the cassette is selected.
The ◀ (reverse) indicator illuminates when the back side is selected.

⓬ HEADPHONES jack
Headphones may be inserted either to monitor the input signals to be recorded or to listen to a recording in the playback mode.

⓭ ⏏ (eject) button
Press this button to open the cassette holder.

⓮ TIMER switch
You can set the unit to record or play back at a predetermined time by connecting any commercially available timer. To record, set this timer switch to REC. To play back, set it to PLAY.

SECTION 1
OUTLINE

1-1. CIRCUIT DESCRIPTION

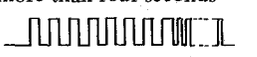
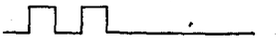
The deck mechanism of this set is one of TCM-130R series mechanisms (TC-FX500R or TC-78 in FH-7). Therefore, the mechanical operation is the same as TC-FX500R and TC-78.

Mechanism controller IC9310N-021 (IC501)

TC9310N is an LSI for programmable ROM alley (PRA) controller. IC501 controls standard operation of mechanism.

- **Function of each terminal**

Terminal No.	Name	Function
1.	GND	Grounding terminal of power supply.
2.	OSC	Clock oscillation terminal. (about 9 kHz on this set.)
3.	$\overline{\text{RESET}}$ (INPUT)	Signal input to put all of the operation of the set into the initial state.
4.	$\overline{\text{FAST REV}}$ (INPUT)	Signal input to command the mechanism to Fast-Forward mode of REVERSE direction. This terminal becomes in AMS mode (◀ + ◀◀ or ▶ + ◀◀) when this terminal is put into "L" in waiting operation in AMS mode.
5.	$\overline{\text{STOP}}$ (INPUT)	Signal input to release a mode designated by other input switches.
6.	$\overline{\text{FWD}}$ (INPUT)	Signal input to command the mechanism to play back the tape. This terminal becomes in record-mode command signal when this terminal is put into "L" together with REC-signal input at the same time. This terminal becomes in the commanding signal to put the set in auto play when this terminal becomes in "L" together with $\overline{\text{FAST-REVERSE}}$ input simultaneously.
7.	$\overline{\text{FF}}$ (INPUT)	Signal input to command the mechanism to set in fast-forward mode. This terminal becomes in AMS mode (◀ + ◀◀ or ▶ + ◀◀) when this terminal is put into "L" in waiting operation in AMS mode.
8.	$\overline{\text{REC}}$ (INPUT)	Signal input to command the set to become in record-monitor mode. This input is disabled when the set is in fast-forward or fast-reverse and $\overline{\text{STOP}}$ input is in "L".
9.	$\overline{\text{PAUSE}}$ (INPUT)	Command-signal input to make the set in stop operation temporarily, i.e., pause, or restart operation during playback (▶, ◀) and record mode. This is of a self-set and self-reset type. This terminal is reset when the mode is in fast-forward or fast-reverse and $\overline{\text{STOP}}$ and $\overline{\text{REC MUTE}}$ signals are in "L". In other conditions, this terminal can be reset or set. In auto-space operation, this terminal is command-signal input to release record-muting mode in case $\overline{\text{REC MUTE}}$ is in "H".
10.	$\overline{\text{AMS}}$ (INPUT)	Signal input to command the mechanism to waiting operation in AMS mode and effective only in stop, playback and pause modes.
11.	$\overline{\text{REV}}$ (INPUT)	Signal input to command the mechanism to play back the tape of REVERSE direction.
12.	$\overline{\text{REC MUTE}}$ (INPUT)	Command-signal input to mute record signal and effective only in record and record pause modes. When this signal is in "L", pause operation is reset. Muting operation is maintained for four seconds after disappearance of this signal (auto-space operation). Auto-space operation is released on receipt of $\overline{\text{PAUSE}}$ input in "L" when this input is in "H".
13.	$\overline{\text{SHUT OFF}}$ (INPUT)	Input of tape-travel detection. Pulse signal is put into this terminal during forward, fast forward, rewind and record modes. In forward and record modes, the mechanism shuts off and becomes in stop mode in two seconds after the stoppage of tape travel, i.e., stop of pulse. In fast-forward and fast-reverse modes, the mechanism shuts off and becomes in stop mode one second after the stoppage of tape travel likewise.

Terminal No.	Name	Function
14.	D IN (INPUT)	Signal input to detect the direction of head. "L": Forward direction "H": Reverse direction
15.	REV LED (OUTPUT)	Signal output to inform playback mode. Puts out "H" signal in reverse playback (◀ direction), playback-pause and reverse AMS (◀ +▶▶, ◀ +◀◀ direction) modes. Otherwise; L.
16.	$\overline{\text{AMS IN}}$ (INPUT)	Signal input to put the set into AMS operation. AMS mode is made when this signal is in "L".
17.	BIAS (OUTPUT)	Signal output to change BIAS OSC ON/OFF. Puts out "H" signal in record and record-muting modes. Otherwise; L.
18.	$\overline{\text{REC MUTE}}$ (OUTPUT)	Signal output to release record muting mode. Record mode: L Otherwise: H
19.	LINE MUTE (OUTPUT)	Signal output to release line muting mode. Puts out "H" signal in playback (▶, ◀ direction), record, record-monitor, record-pause and record-muting modes. Line muting is off with this signal in "H". Otherwise; L.
20.	FAST-REV MOTOR (OUTPUT)	Motor drive (rotating clockwise) output. (active: "H") Puts out "H" signal in fast-reverse (◀◀), auto-play AMS (▶ +◀◀, ◀+◀◀) and rewind mode in AMS (▶ + ▶▶). Otherwise; L.
21.	FWD MOTOR (OUTPUT)	Motor drive (rotating counter-clockwise) output. (active: "H") Puts out "H" signal in playback (▶, ◀ direction), record, record-muting, FF, auto-play (◀ + ▶▶) AMS (▶+▶▶, ◀+◀◀) modes, rewind mode and during cam-gear driving in AMS (◀ +◀◀). Otherwise; L.
22.	PM2 (OUTPUT)	Solenoid drive output. (active: "H") Puts out "H" signal in pause at FF (▶▶) and AMS modes. Momentarily puts out "H" signal in REV (◀) mode. Otherwise; L.
23.	PM1 (OUTPUT)	Solenoid drive output. (active: "H") Puts out "H" signal in playback (▶, ◀ direction), record, record-muting modes. Momentarily puts out "H" signal in AMS mode. Otherwise; L.
24.	REC LED (OUTPUT)	Signal output to inform record mode. Puts out "H" signal in record, record-monitor, record-pause and record-muting modes. Otherwise; L.
25.	PAUSE LED (OUTPUT)	Signal output to inform pause and reset modes. Puts out "H" signal in pause mode. Puts out "H" and "L" signals alternately during record muting and during reset mode. in record-muting (Auto space) more than four seconds  in reset 
26.	FWD LED (OUTPUT)	Signal output to inform forward mode. Puts out "H" signal in FWD playback (▶ direction), forward pause, record, record-pause, auto-play (▶ +◀◀ direction) and AMS (▶+▶▶, ▶ +◀◀ direction) modes. Otherwise; L.
27.	AMS LED (OUTPUT)	Signal output to inform waiting operation in AMS mode. Puts out "H" signal in waiting operation in AMS mode and during AMS mode.
28.	VDD	5 V power supply terminal.

Sub-mechanism controller TC9310N-022 (IC505)

IC505 is for option operation control of the mechanism.

The option operations are as follows:

1. Timer function
2. Head direction indication
3. Detection of playback (▶ , ◀), EJECT simultaneous operation
4. Blank skip, music scan

The input of terminals ④, ⑤ , ⑥ and ⑧ detect the present operation when IC505 performs blank skip, music scan during playback (▶ , ◀).

- **Function of each terminal**

Terminal No.	Name	Function	Terminal No.	Name	Function
1.	GND	Power supply ground terminal.	14.	FAST-REV inhibitory SW (INPUT)	ON/OFF switching input for FAST-REV (◀◀) output in skip operation. "H": FAST-REV (◀◀) output is obtainable. "L": FAST-REV (◀◀) output is inhibited.
2.	OSC	Clock oscillation terminal (about 9 kHz on this set).			
3.	RESET (INPUT)	Input to initialize all operations. Resets at "L".			
4.	REV LED (INPUT)	Input to detect reverse operation. "H": reverse	15–20		Not used on this model.
5.	FWD LED (INPUT)	Input to detect forward operation. "H": forward	21.	AMS (OUTPUT)	AMS operation control output during music scan, blank skip. "L": AMS
6.	REC LED (INPUT)	Input to detect record operation. "H": record	22.	FF (OUTPUT)	Tape forward direction fast forward (▶▶) operation control output during music scan, blank skip operations. "L": fast forward
7.	AMS LED (INPUT)	Input to detect AMS. "H": AMS waiting or AMS operation			
8.	LINE MUTE (INPUT)	Input to detect line muting release. "H": line muting release	23.	FAST-REV (OUTPUT)	Tape reverse direction fast forward (◀◀) operation control output during skip operation. "L": FAST-REVERSE
9.	PM1 (INPUT)	Input to detect PM1 ON/OFF. "H": PM1 ON "L": PM1 OFF			
10.	SKIP (INPUT)	Skip operation (Music scan, blank skip) ON/OFF switching input. "H": skip operation ON "L": skip operation OFF	24.	TIMER (OUTPUT)	Timer record, playback operation output. "L" for only 0.5 seconds after reset (2 sec), otherwise "H".
11.	EJECT (INPUT)	EJECT detection input. "L": EJECT	25.	FAST-REV MOTOR (OUTPUT)	Motor drive (clockwise direction rotation) output. (active: "H") "H" for 0.5 seconds when EJECT button is pressed within 0.4 seconds of PM1 (head board) ON. Otherwise "L".
12.	AMS IN (INPUT)	Playback signal input. "H": with music inputted "L": with no music inputted			
13.	Counter SW (INPUT)	5 second timer ON/OFF switching input. "L": ON, "H": OFF. 10 second Blank skip, Music scan operation time is determined by counting 5 seconds two times.	26.	FWD LED (OUTPUT)	Head direction indication (forward) output. "H": forward direction
			27.	REV LED (OUTPUT)	Head direction indication (reverse) output. "H": reverse direction.
			28.	VDD	5 V power supply terminal.

Sub-mechanism controller TC9305P-003P (IC504)

TC9305P is the controller LSI for programmable ROM array (PRA). IC504 is a control IC for blank skip or cycle operation. This IC controls cycle operation on this model.

- **Function of each terminal**

Terminal No.	Name	Function
1.	GND	Power supply ground terminal.
2.	OSC	Clock oscillation terminal (about 3.2 kHz on this set)
3.	$\overline{\text{RESET}}$ (INPUT)	Input to initialize all operations. "L": reset.
4.	MODE (INPUT)	Repeat/blank skip operation switching input. •Set to "L" on this model. "L": repeat "H": blank skip
5.	SW (INPUT)	ON/OFF switching input for operation selected at MODE terminal "H": ON "L": OFF
6.	REC MODE DET (INPUT)	Record operation detecting input. "H": record
7.	$\overline{\text{SHUT-OFF}}$ (INPUT)	Input of signal which detected tape transport. A pulse is input when tape is in playback (directions), record, fast forward, rewind.
8.	LINE MUTE DET (INPUT)	Not used on this model. (Line muting release detection input)
9.	REV MODE DET (INPUT)	Reverse operation detection input. "H": reverse
10.	FWD MODE DET (INPUT)	Forward operation detection input. "H": forward
11.	V/R (INPUT)	1 direction playback/2 direction playback switching input. Goes low when opened because of pull-down resistor. •Set to "L" on this model. "H": 1 direction playback "L": 2 direction playback
12.	FF OUT (OUTPUT)	Not used on this model.
13.	$\overline{\text{FAST-REV OUT}}$ (OUTPUT)	Not used on this model. (The auto-play (▶ + ◀◀) reverse direction fast signal is output when used as 1 direction playback.)
14.	$\overline{\text{FWD OUT}}$ (OUTPUT)	Forward operation control output during repeat operation. "L": forward
15.	AMS OUT (OUTPUT)	Not used on this model.
16.	VDD	5V power supply.

MECHANISM CONTROL IC (IC501, 505) CHANGE

IC501 TC9310N-021 ➡ TC9310N-032
IC505 TC9310N-022 ➡ TC9310N-033

- **Applicable Serial No. :**

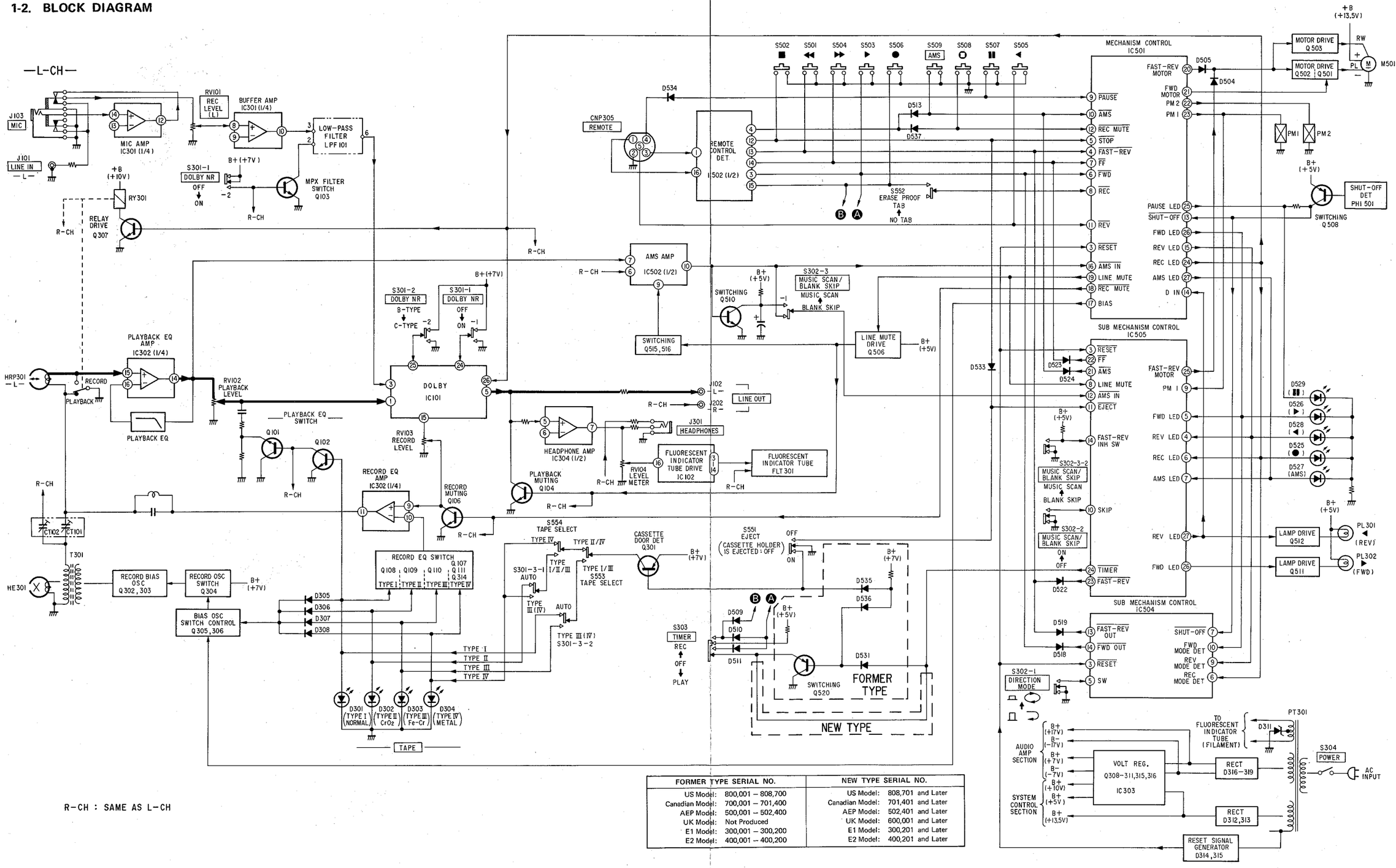
US Model:	808,701 and later
Canadian Model:	701,401 and later
AEP Model:	502,401 and later
UK Model:	600,001 and later
E1 Model:	300,201 and later
E2 Model:	400,201 and later

Because of the mechanism control IC change, TIMER switch circuit has been changed and there are 2 types of IC501 and 2 types of IC505.
Be careful when replacing IC501 or IC505.

- **Changed Parts**

Ref. No.	Former Parts	New Parts		Remarks
	Description	Part No.	Description	
C503	ELECT 10 μF 25 V	. . . . .		DELETED
D530	DIODE 1SS119	. . . . .		DELETED
D531	DIODE 1SS119	. . . . .		DELETED
D535	DIODE 1SS119	. . . . .		DELETED
D536	DIODE 1SS119	. . . . .		DELETED
IC501	IC TC9310N-021	8-759-201-86	IC TC9310N-032	CHANGED
IC505	IC TC9310N-022	8-759-201-87	IC TC9310N-033	CHANGED
Q520	TRANSISTOR 2SA1048-GR	. . . . .		DELETED
R570	CARBON 390 Ω 1/6 W	. . . . .		DELETED
R574	CARBON 4.7 kΩ 1/6 W	. . . . .		DELETED
R575	CARBON 10 kΩ 1/6 W	. . . . .		DELETED

1-2. BLOCK DIAGRAM



R-CH : SAME AS L-CH

FORMER TYPE SERIAL NO.		NEW TYPE SERIAL NO.	
US Model:	800,001 – 808,700	US Model:	808,701 and Later
Canadian Model:	700,001 – 701,400	Canadian Model:	701,401 and Later
AEP Model:	500,001 – 502,400	AEP Model:	502,401 and Later
UK Model:	Not Produced	UK Model:	600,001 and Later
E1 Model:	300,001 – 300,200	E1 Model:	300,201 and Later
E2 Model:	400,001 – 400,200	E2 Model:	400,201 and Later

TC-FX505R

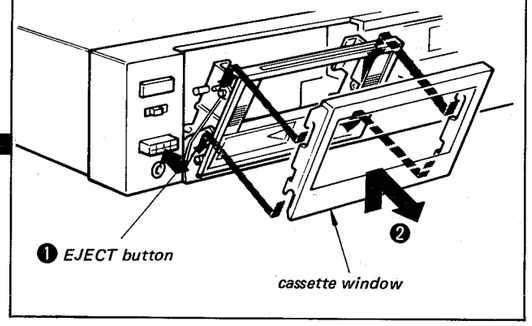
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

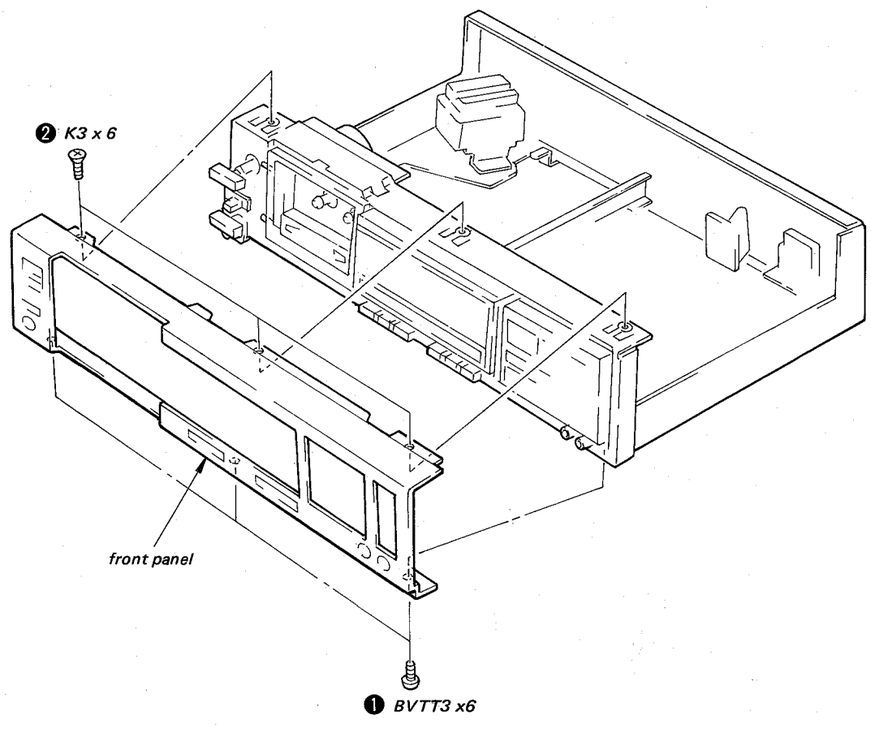
CASE REMOVAL

Remove case by taking out four screws securing case.

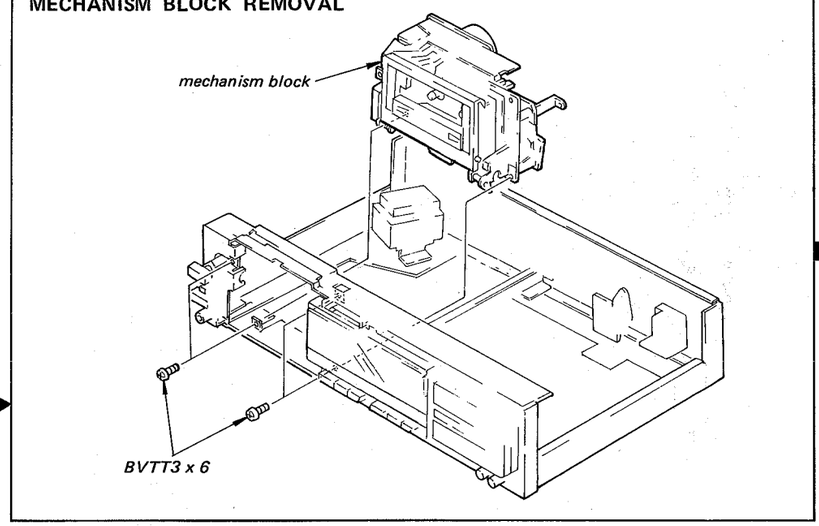
CASSETTE WINDOW REMOVAL



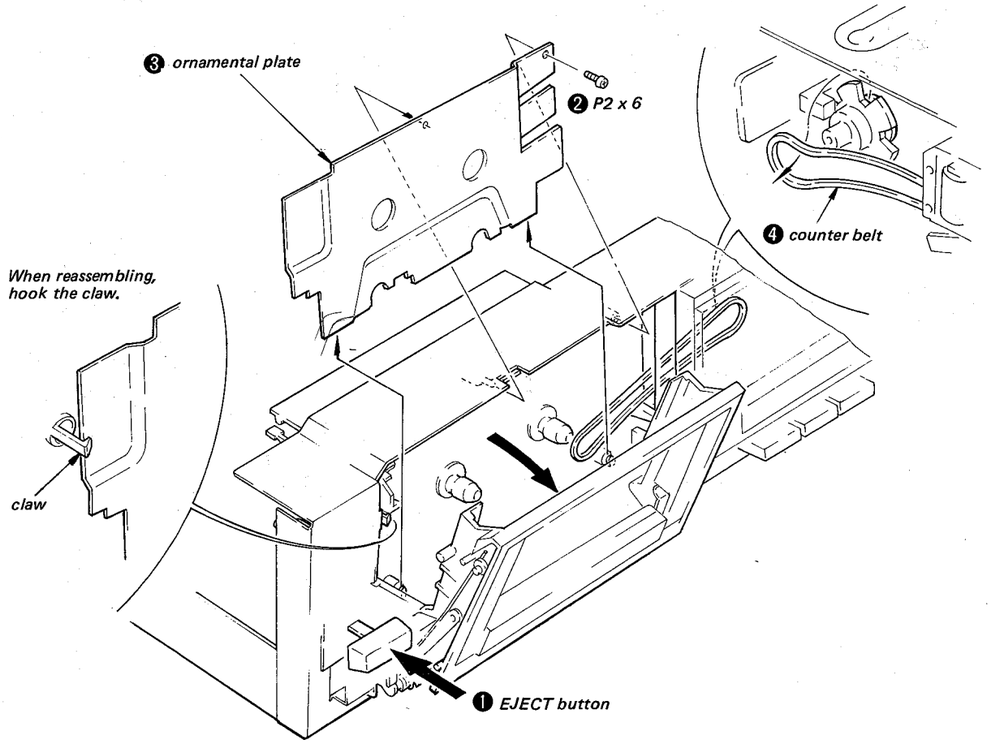
FRONT PANEL REMOVAL



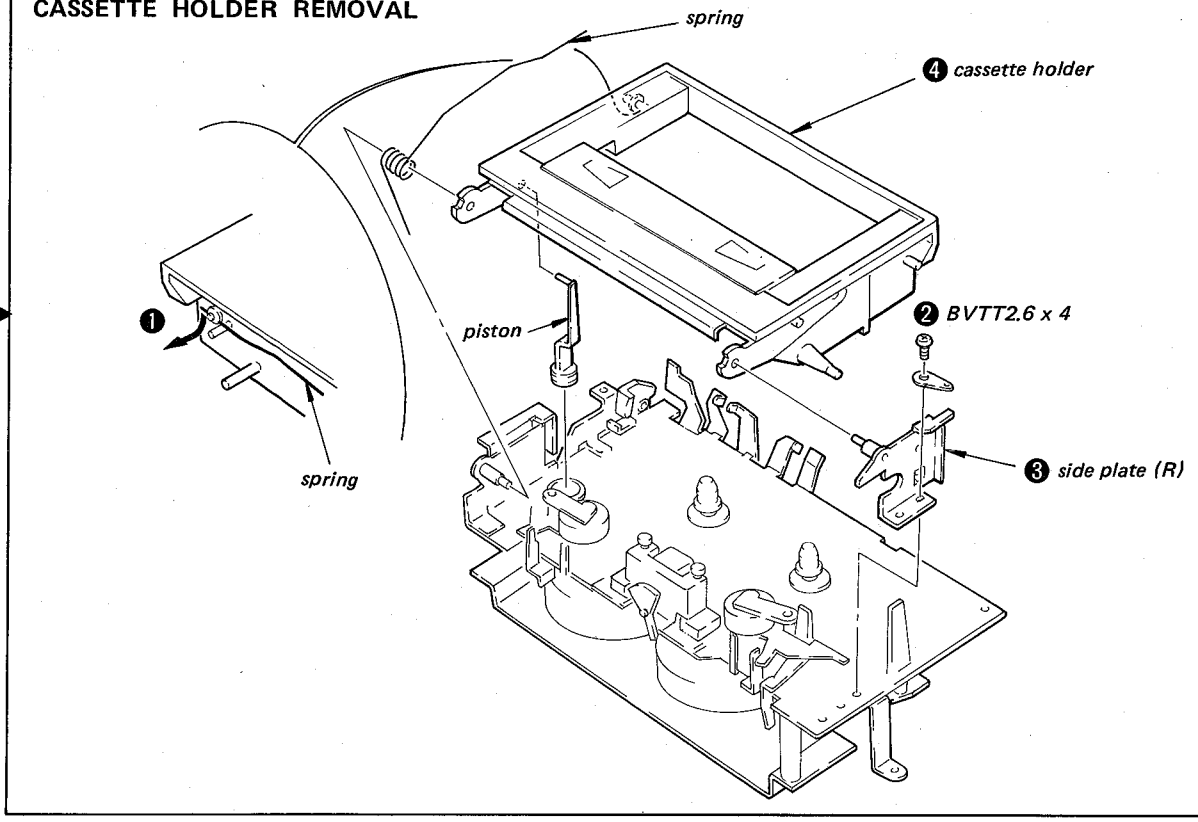
MECHANISM BLOCK REMOVAL



ORNAMENTAL PLATE AND COUNTER BELT REMOVAL

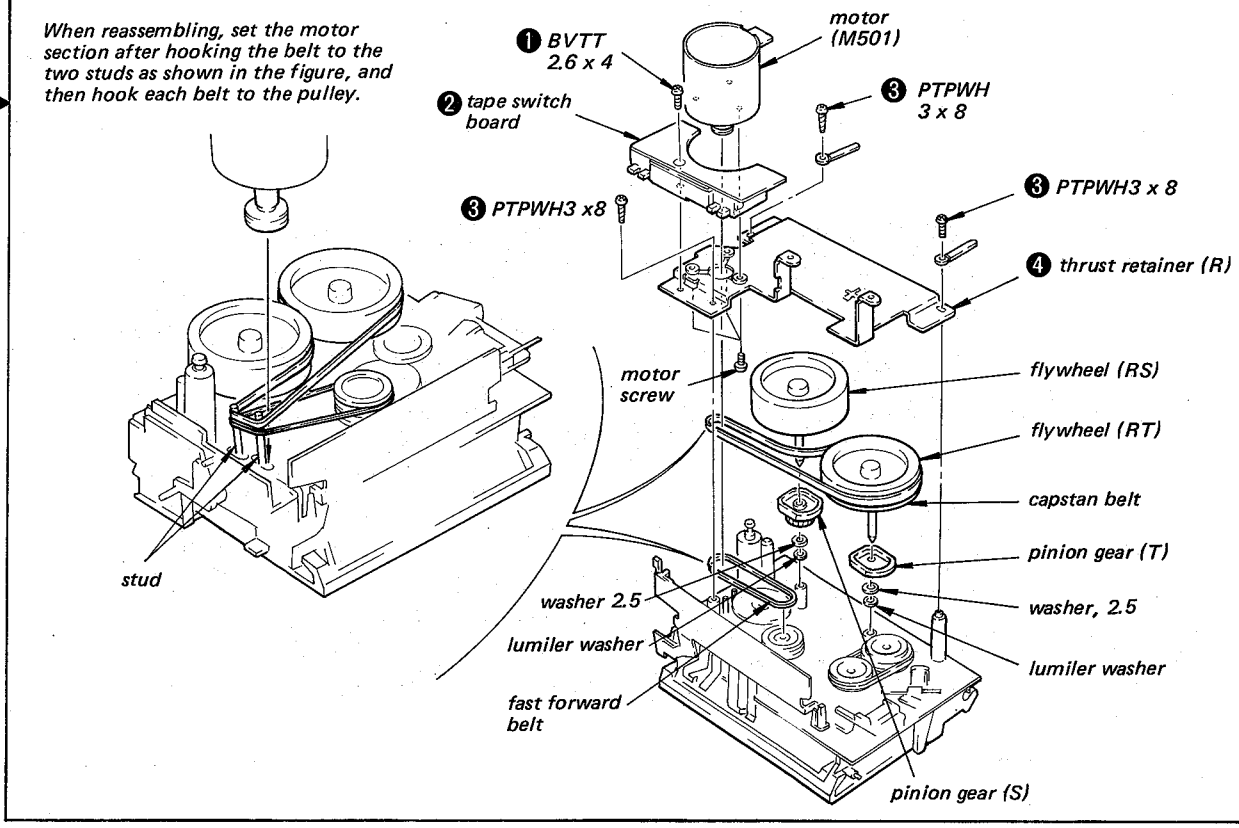


CASSETTE HOLDER REMOVAL



TAPE SWITCH BOARD, MOTOR AND FLYWHEEL REMOVAL

When reassembling, set the motor section after hooking the belt to the two studs as shown in the figure, and then hook each belt to the pulley.



SECTION 3
ADJUSTMENTS

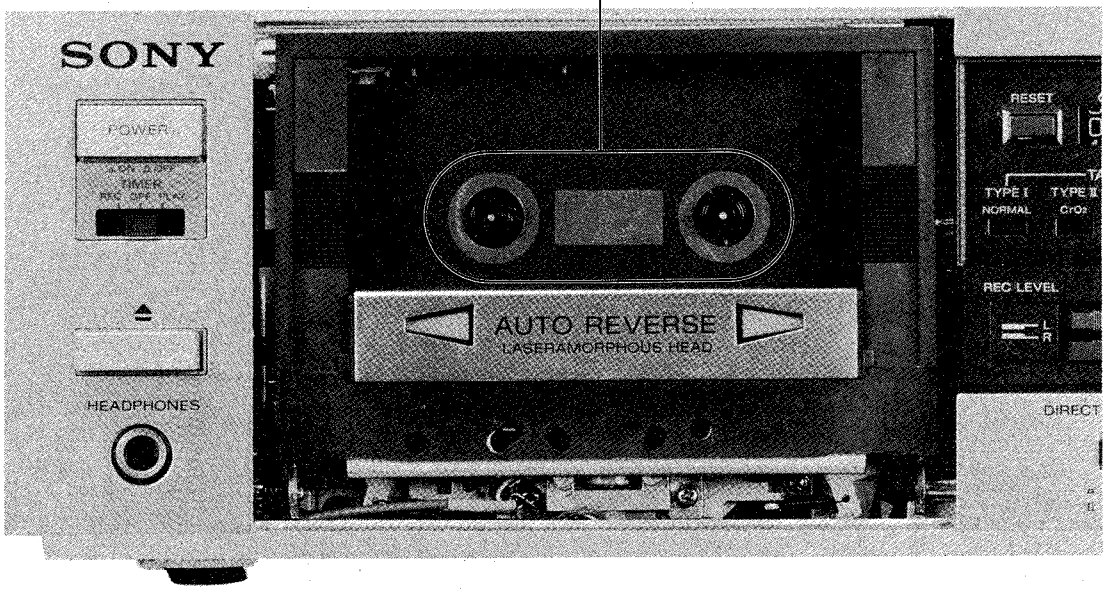
3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
   - record/playback head
   - erase head
   - capstan
   - pinch roller
   - rubber belts
   - idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

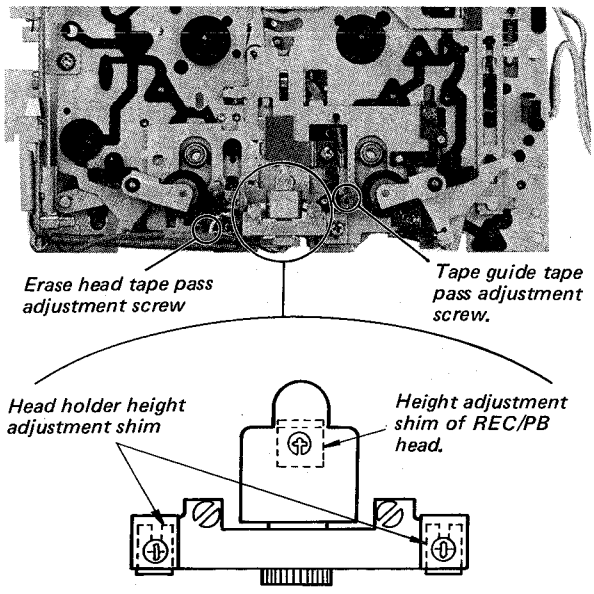
Torque	Torque meter	Meter reading
FWD	CQ-102C	28 –60 g·cm (0.39 – 0.83 oz·inch)
FWD Back tension	CQ-102C	2 – 7 g·cm (0.03 – 0.09 oz·inch)
REV	CQ-102RB	28 – 60 g.cm (0.39 – 0.83 oz·inch)
REV Back tension	CQ-102RB	2 – 7 g·cm (0.03 – 0.09 oz·inch)
FF, REW	CQ-201B	80 – 165 g·cm (1.1 – 2.29 oz·inch)



Tape Path Adjustment

When assembling the erase head and head holder, and when replacing the tape guide (R), be sure to perform the following adjustments.

1. Using a mirror tape cassette, adjust each of the adjustment screws until there is no tape curling.
2. Perform adjustments by changing the height adjustment shim of the head holder assembly and the height adjustment shim of the record/playback head, so that the core of the record/playback head is positioned correctly for both FWD and REV.


Erase head tape pass adjustment screw
Tape guide tape pass adjustment screw.
Head holder height adjustment shim
Height adjustment shim of REC/PB head.

3. After the adjustment, lock the screws with locking compound.

The height adjustment shim of the head holder assembly.

Thickness (mm)	Part No.
0.05	3-307-477-41
0.1	3-307-477-01
0.2	3-307-477-11
0.3	3-307-477-21
0.4	3-307-477-31

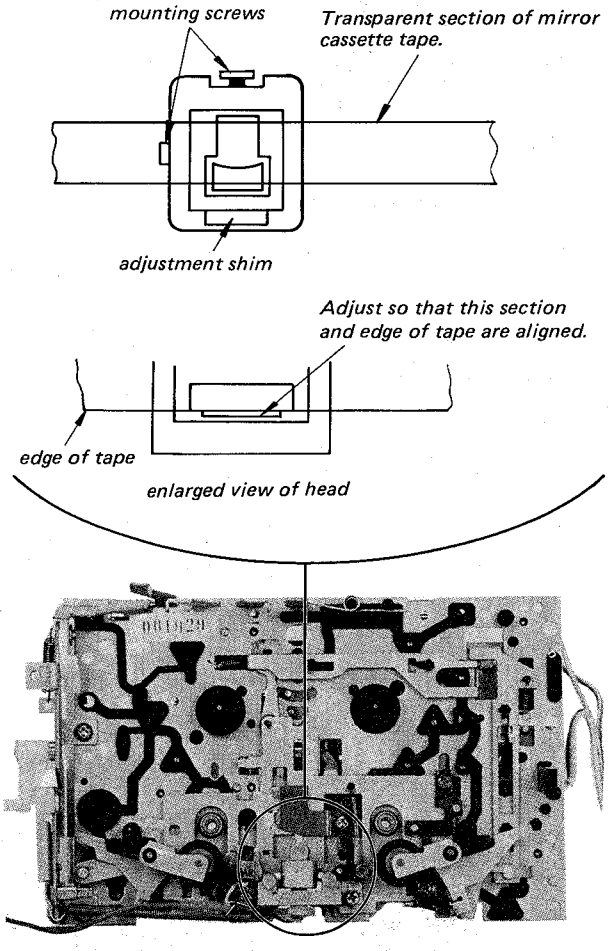
The height adjustment shim of the REC/PB head.

Thickness (mm)	Part No.
0.05	3-307-480-02
0.1	3-307-479-01
0.2	3-307-479-11
0.3	3-307-479-21
0.4	3-307-479-31

Record/Playback Head Height Adjustment

The following adjustments should be made when the record/playback head is replaced.

1. Remove the head pad of the mirror tape cassette.
2. Using the leader section of the mirror cassette tape, adjustments are made by changing the adjusting shim so that the core and the edge of the tape become as shown in the illustration below when the tape is moved across the head.

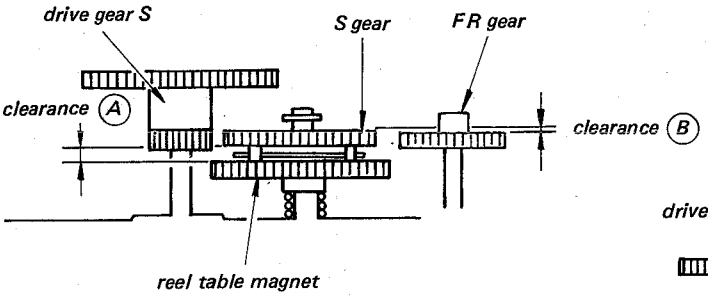

mounting screws
Transparent section of mirror cassette tape.
adjustment shim
Adjust so that this section and edge of tape are aligned.
edge of tape
enlarged view of head

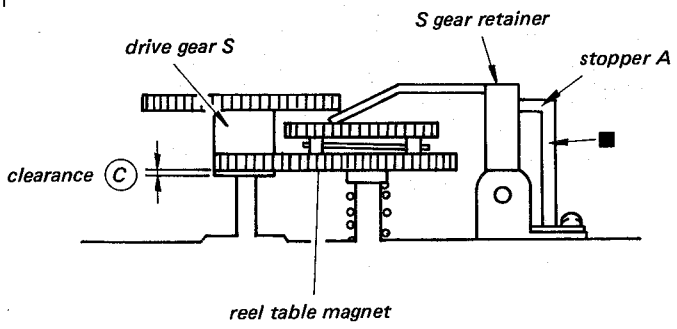
The height adjustment shim of the REC/PB head.

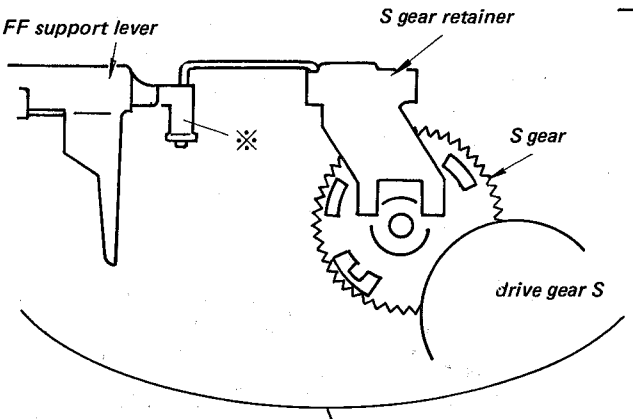
Thickness (mm)	Part No.
0.05	3-307-480-02
0.1	3-307-479-01
0.2	3-307-479-11
0.3	3-307-479-21
0.4	3-307-479-31

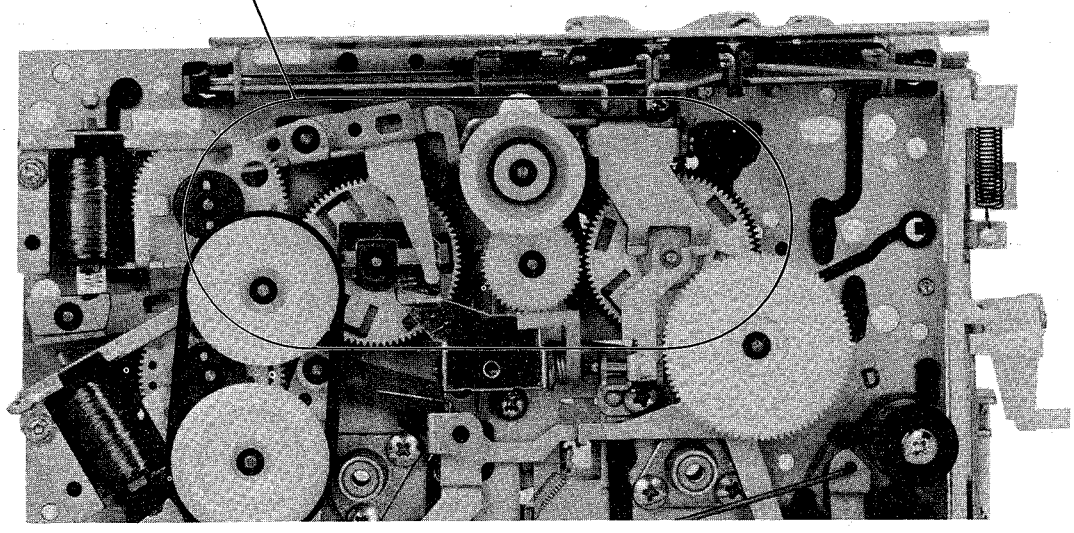
Supply Gear Retainer Position Adjustment

1. Confirm that the clearance (A) is more than 0.5 mm and the clearance (B) is 0 – 0.3 mm in reverse/fast-reverse AMS mode (press ◀◀ button after pressing AMS button in reverse mode).
2. If not, adjust by bending ※ section of FF support lever to meet the specifications.
3. Confirm that the clearance (A) is more than 0.5 mm in reverse-pause mode.
4. Adjust by bending ■ section of stopper A so that the clearance (C) is 0 – 0.3 mm in reverse mode. At that time, even if the value is within the specification when stopper A does not touch S gear retainer, bend stopper A just before stopper A touches S gear retainer.



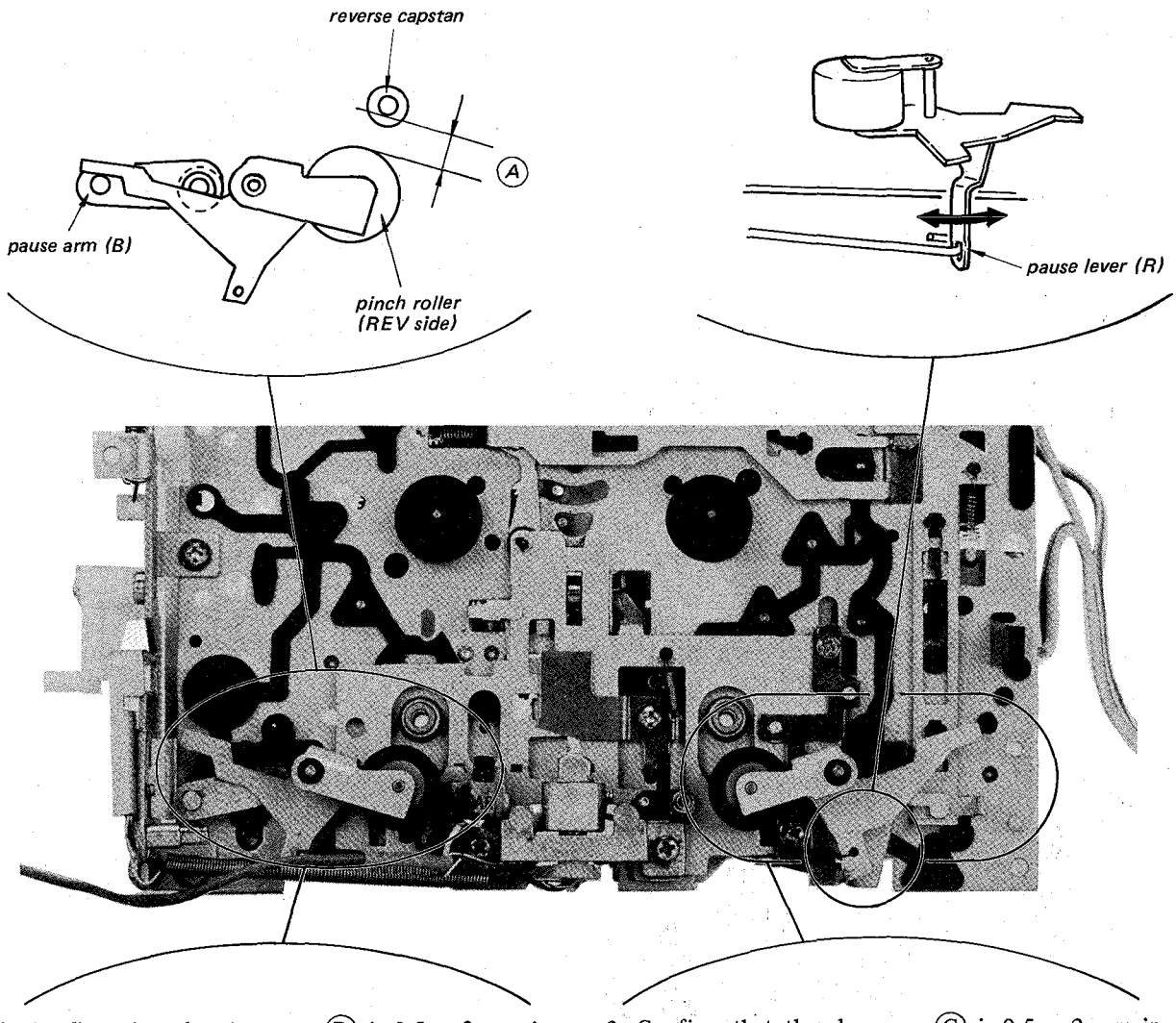






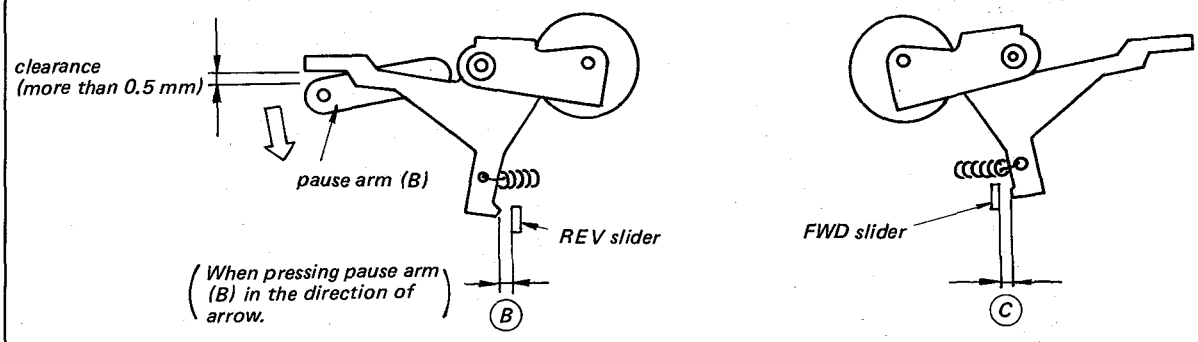
Pause Arm Position Adjustment

1. Confirm that clearance (A) is 0.5 – 1 mm in reverse-pause mode. If not, adjust by bending pause lever (R) in stop mode, and confirm in reverse-pause mode again.



2. Confirm that the clearance (B) is 0.5 – 2 mm in reverse mode.

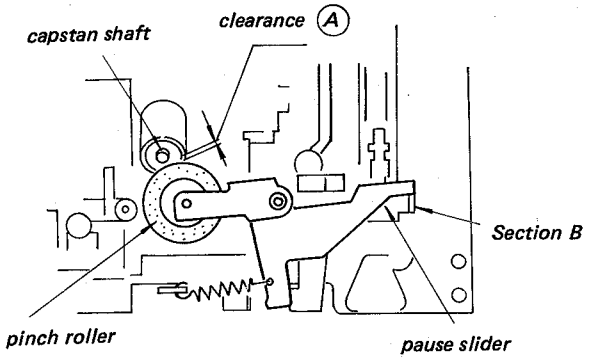
3. Confirm that the clearance (C) is 0.5 – 2 mm in forward mode.



Clearance Between Pinch Roller And Capstan Shaft Adjustment

1. Mode: forward-pause

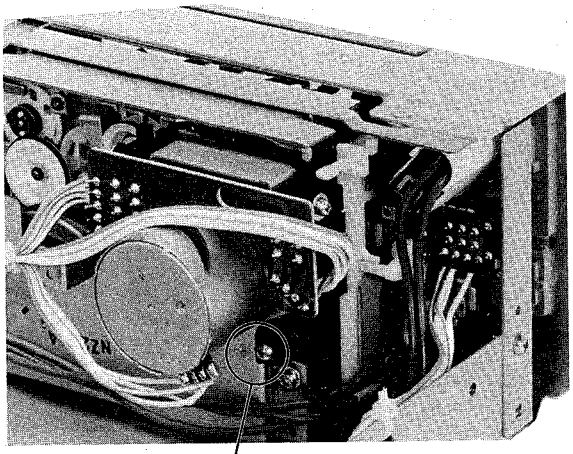
   Adjust by bending section B of pause slider so that the clearance (A) between pinch roller and capstan shaft becomes 0.4 – 0.8 mm.

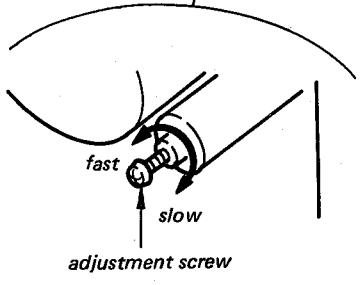


Cassette Holder Opening/Closing Speed Adjustment

1. Insert a CHF-90 or equivalent tape (in terms of weight).
2. Adjust the adjustment screw so that the time required for the cassette holder is 0.4 – 1 seconds when the EJECT button is depressed.

Adjustment Location:





4-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE SELECT switches according to the tape as follows.

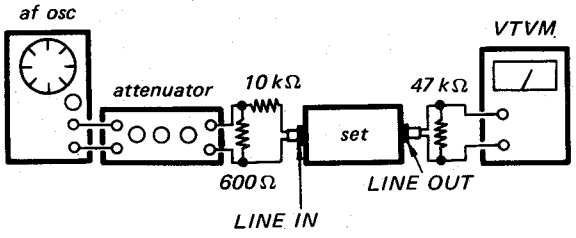
Tape	TAPE SELECT switch
CS-15	AUTO
CS-26	AUTO
CS-30	TYPE III (IV)
CS-40	TYPE III (IV)

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch:	OFF
TAPE SELECT switch:	AUTO
TIMER switch:	OFF

- Standard Record:
  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

– Record Mode –



Standard Input Level

	LINE IN
source impedance	10 kΩ
input level	0.25 V (–10 dB)

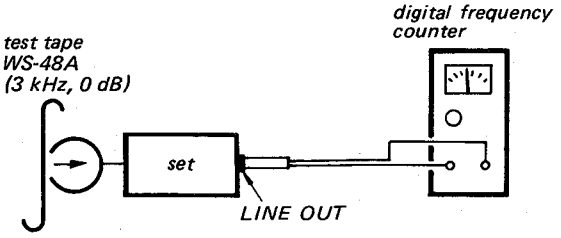
Standard Output Level

	LINE OUT
load impedance	47 kΩ
output level	0.44 V (–5 dB)

Tape Speed Adjustment

Procedure:

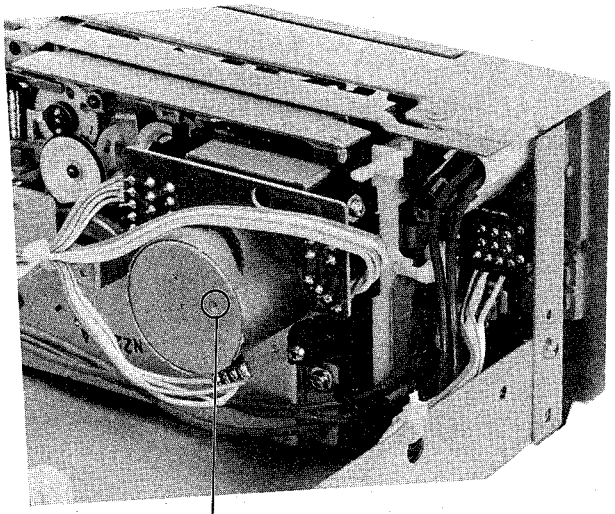
1. Mode: forward playback



Play back the beginning of tape in forward mode, and adjust the adjustable resistor that built in motor for 2,980 – 2,990 Hz reading on the frequency counter.

2. Play back at the tape position in the step 1 in reverse mode. Confirm that the frequency counter reading is 2,960 – 3,010 Hz at that time.
3. Play back the beginning of opposite side of the tape in forward and reverse mode. Confirm that the frequency counter reading is 2,960 – 3,010 Hz at that time.

Adjustment Location: Motor (M501)

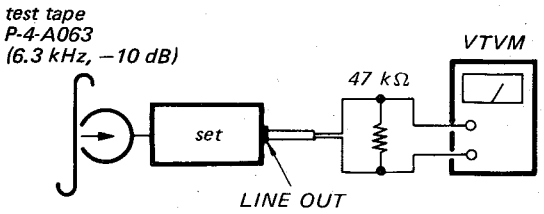


Built-in adjustable resistor
(Adjust the speed by using screwdriver. When turning the screw clockwise, speed is faster.)

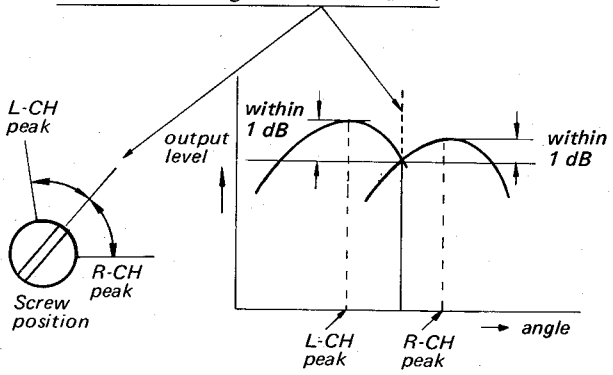
Forward Record/playback Head Azimuth Adjustment

Procedure:

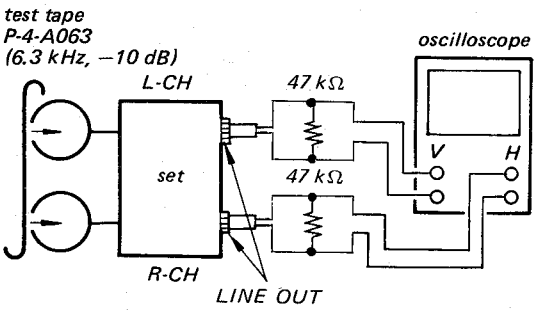
1. Mode: forward playback

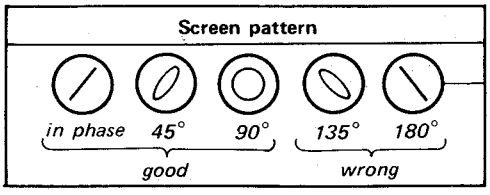


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



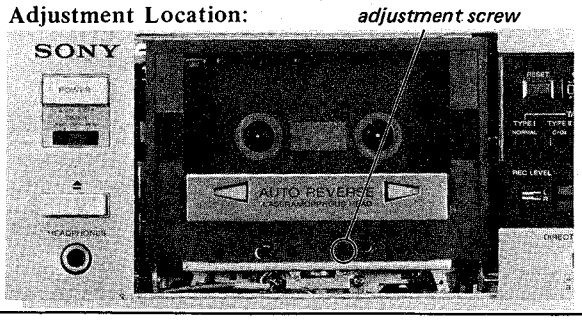
3. Mode: forward playback





4. After the adjustment, lock the screws with locking compound.

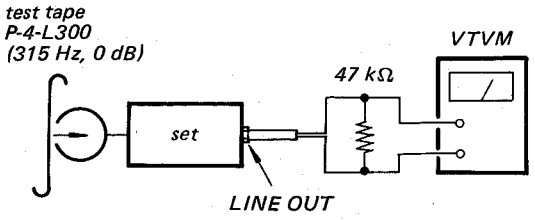
Adjustment Location:



Playback Level Adjustment

Procedure:

Mode: forward playback



Adjust the RV101 (L-CH) and RV201 (R-CH) so that the specification is met.

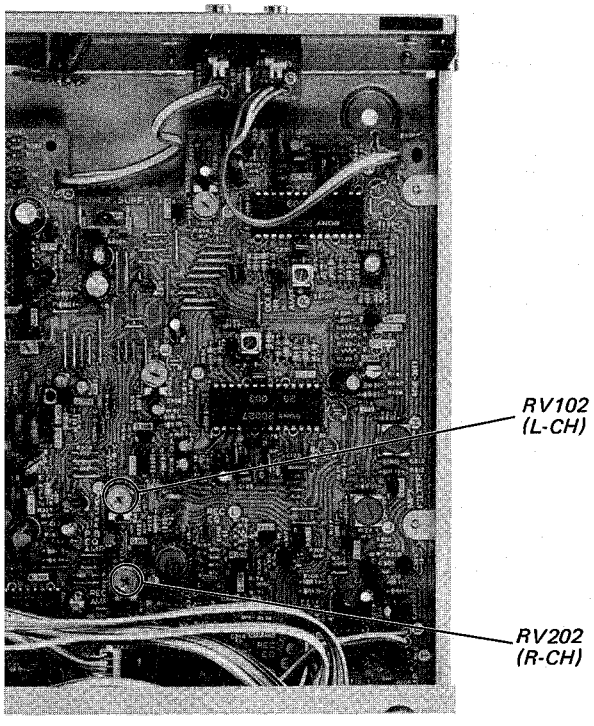
Specification:

LINE OUT level: 0.41 to 0.46 V
(−5.5 to −4.5 dB)

Level difference between channels:
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

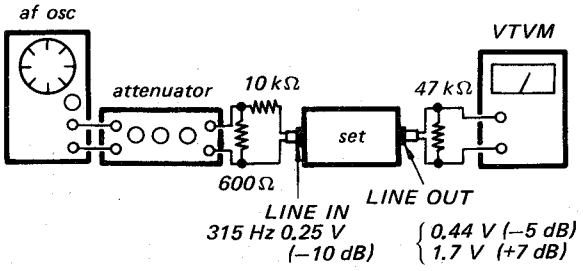
Adjustment Location: audio board



Level Meter Calibration

Procedure:

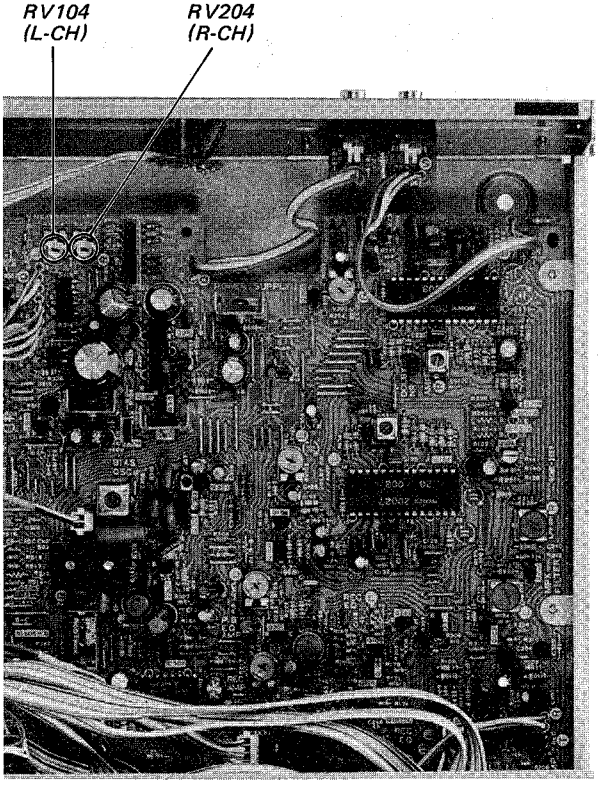
1. Mode: record



2. Set the REC LEVEL control so that the LINE OUT level is 0.44 V (−5 dB).
3. Adjust RV104 (L-CH), RV204 (R-CH) so that the 7th segment from leftside of the level meter goes on and again turn it slowly in the reverse direction until the segment just goes off.

   Note: The adjustment should be made while decreasing the level.
4. Set the REC LEVEL control so that the LINE OUT level is 1.7 V (+7 dB). Make sure that all the lights in the segments go on.

Adjustment Location: audio board



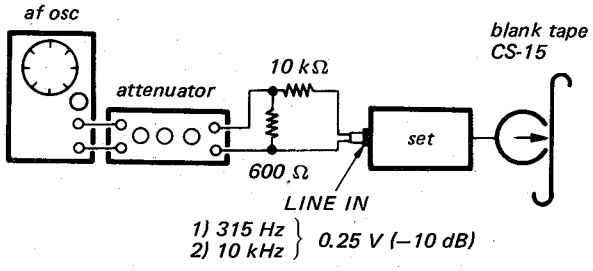
Record Bias Adjustment

Setting:

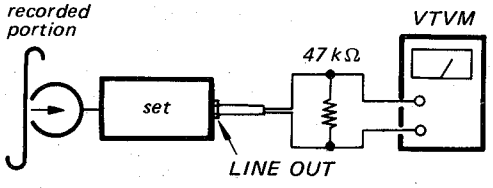
REC LEVEL control: standard record
(See page 20.)

Procedure:

1. Mode: record

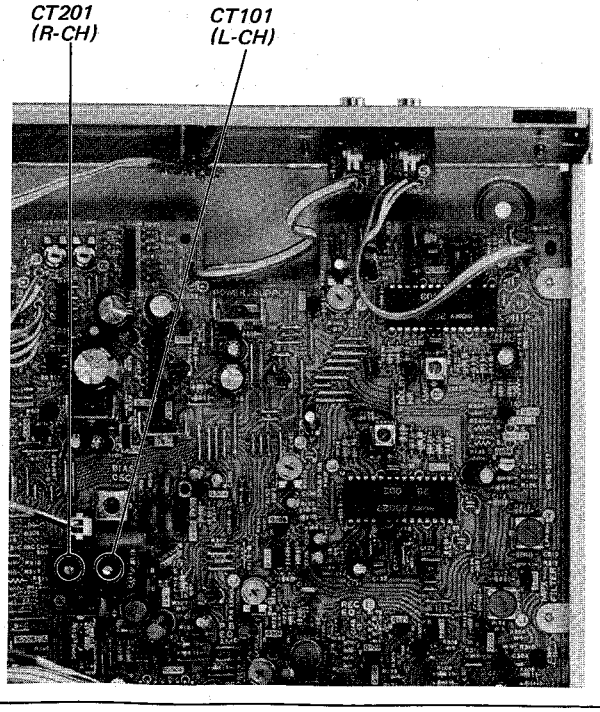


2. Mode: playback



Confirm that the 10 kHz playback output is 0 dB relative to the 315 Hz output. If necessary, adjust CT101 (L-CH), CT201 (R-CH) and repeat the steps given above.

Adjustment Location: audio board



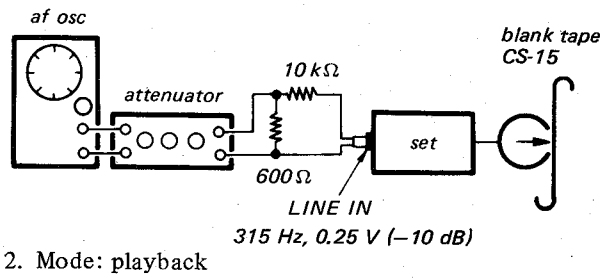
Record Level Adjustment

Setting:

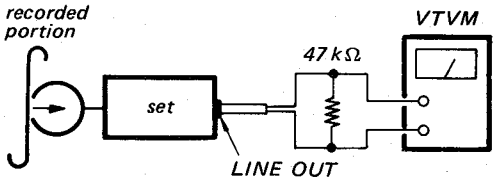
REC LEVEL control: standard record
(See page 20.)

Procedure:

1. Mode: record



2. Mode: playback

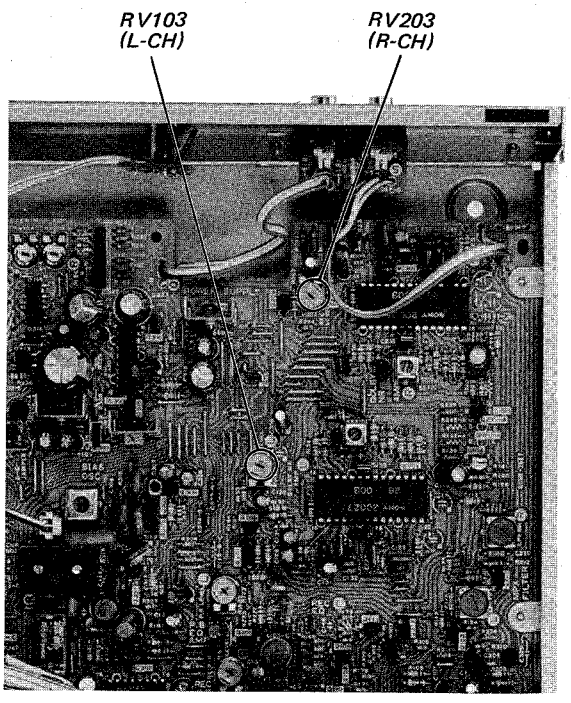


3. Play back the signal recorded in step 1. Confirm that the signal level is within the specification below. If necessary, adjust RV103 (L-CH), RV203 (R-CH) and repeat the step 1-3.

Specification:

LINE OUT level: 0.41–0.46 V
(–5.5 to –4.5 dB)

Adjustment Location: audio board

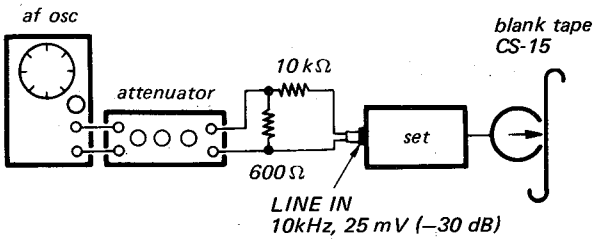


Reverse Playback Head Azimuth Adjustment

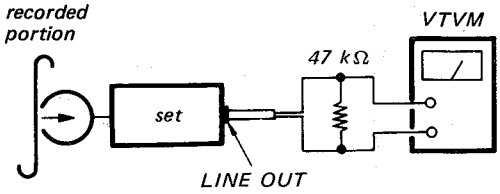
Note: This adjustment should be made after Record Bias Adjustment.

Procedure:

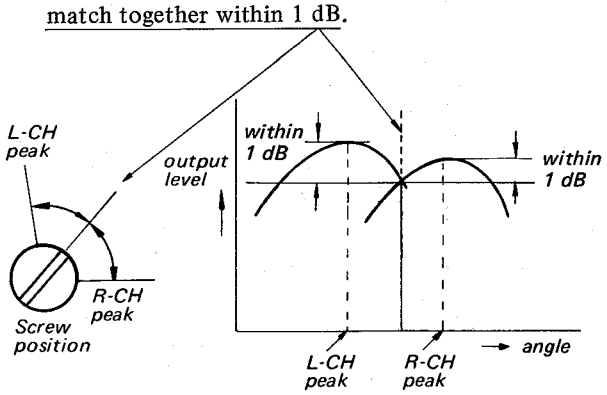
1. Mode: record



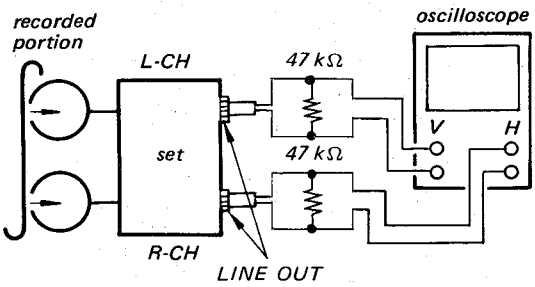
2. Mode: reverse playback

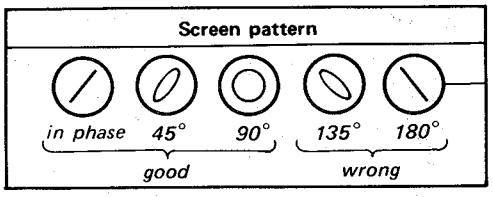


3. Turn the adjustment screw of the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



4. Mode: reverse playback



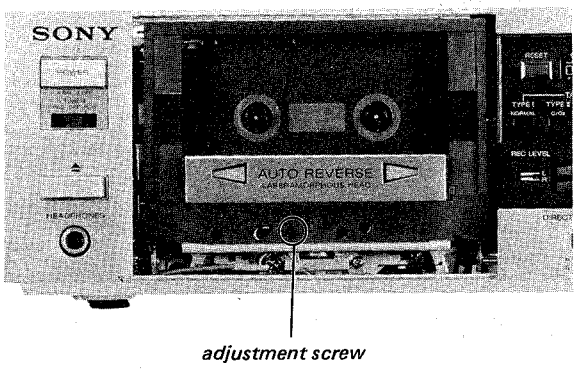


5. Set in forward playback mode, and then in reverse playback mode.

   Check the phase.

6. After the adjustment, lock the screws with locking compound.

Adjustment Location:



SECTION 4
DIAGRAMS

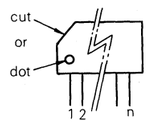
4-1. MOUNTING DIAGRAM

— Conductor Side —

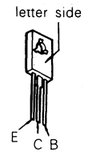
- **Semiconductor Lead Layouts**

2SA1048-GR
2SC2458

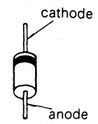
M5218L



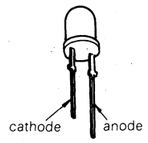
2SB731
2SD809



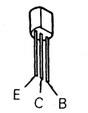
10E2
1SS119
HZ4B2
HZ9A2L



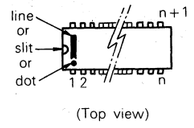
SLR34DC5
SLR34PC5
SLR34URC5



2SC945-P
2SC2001



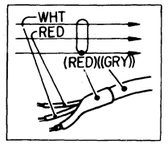
BA6146
CX10032A
CX10033A
CX10034
CX10035
CX20027
CX20028
TC9310N-021
TC9310N-022
TC9305P-003



(Top view)

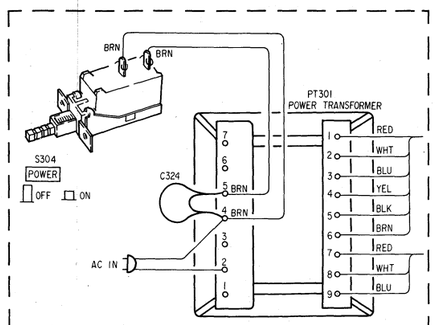
Note:

- Color code of sleeving over the end of the jacket.

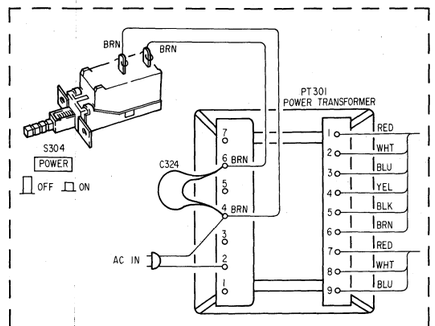


- ○—: parts extracted from the component side.
- ●—: parts extracted from the conductor side.
- ▒ : B + pattern

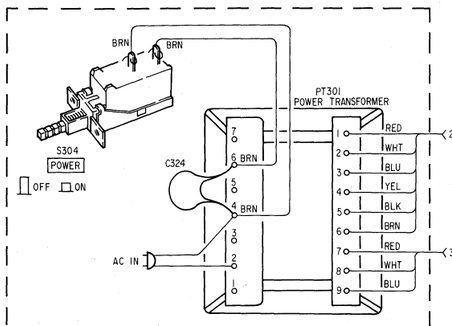
- ▬▶▬ : signal path
- ▬▪▬▶ : L-CH signal path
- ▬▪▪▬▶ : R-CH signal path



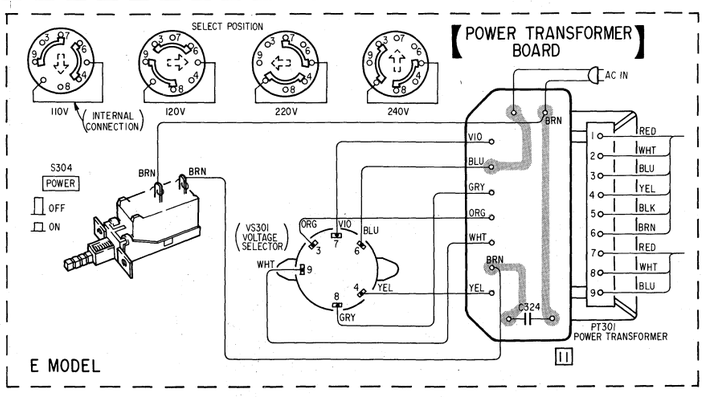
AEP MODEL



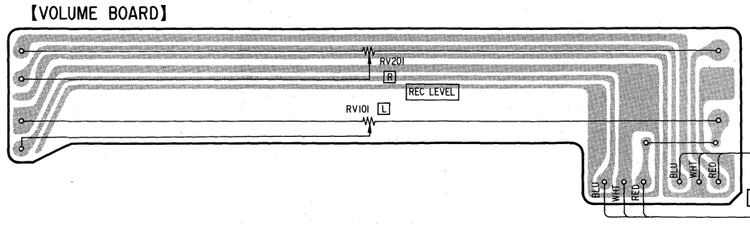
UK MODEL

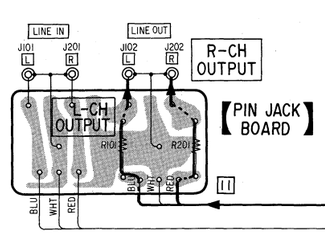


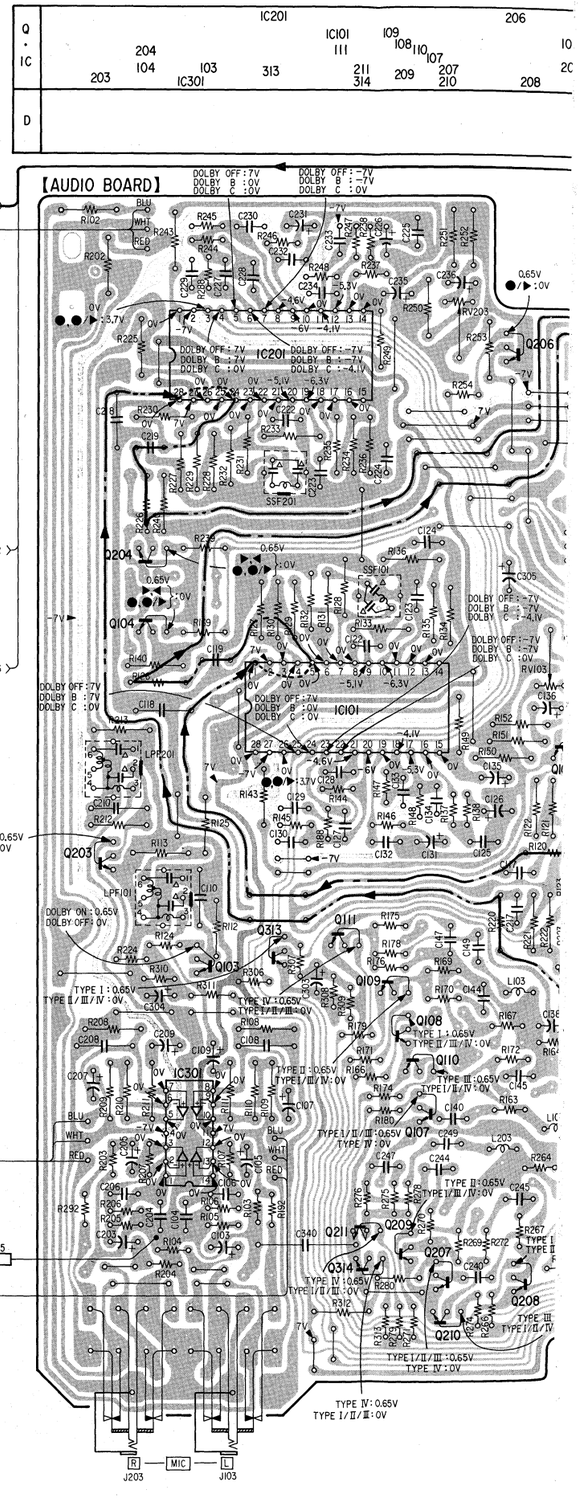
US,CANADIAN MODEL

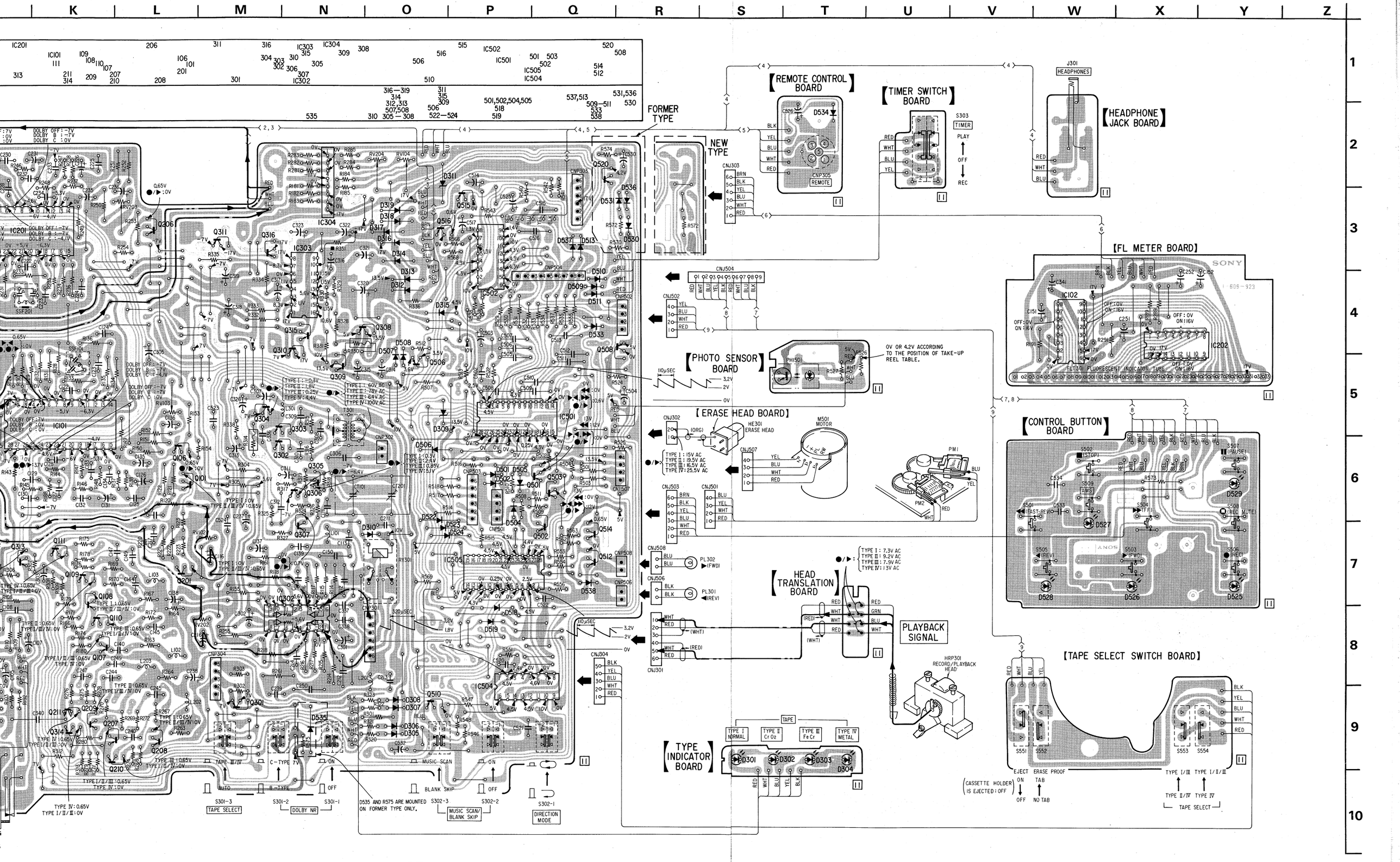


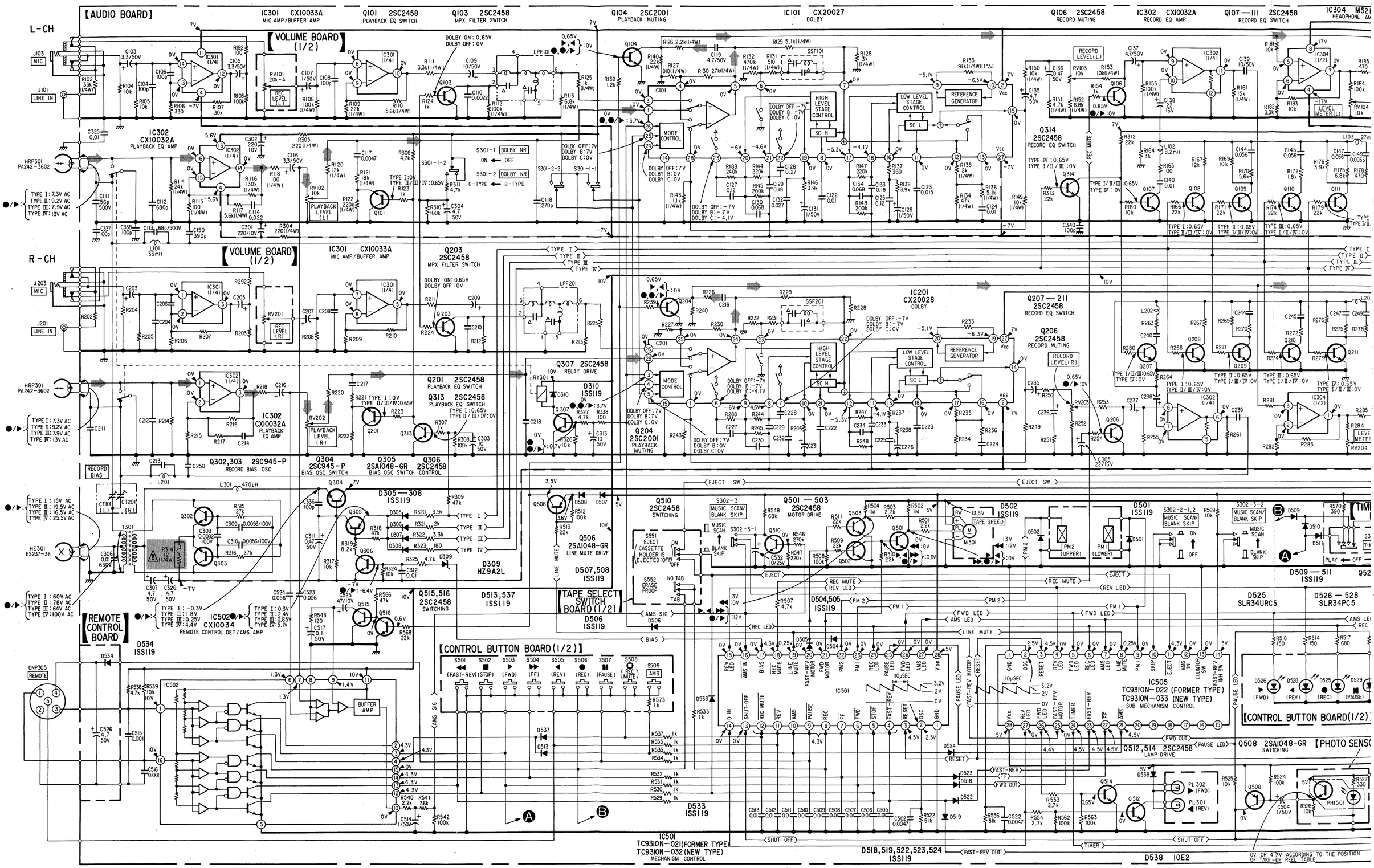
E MODEL

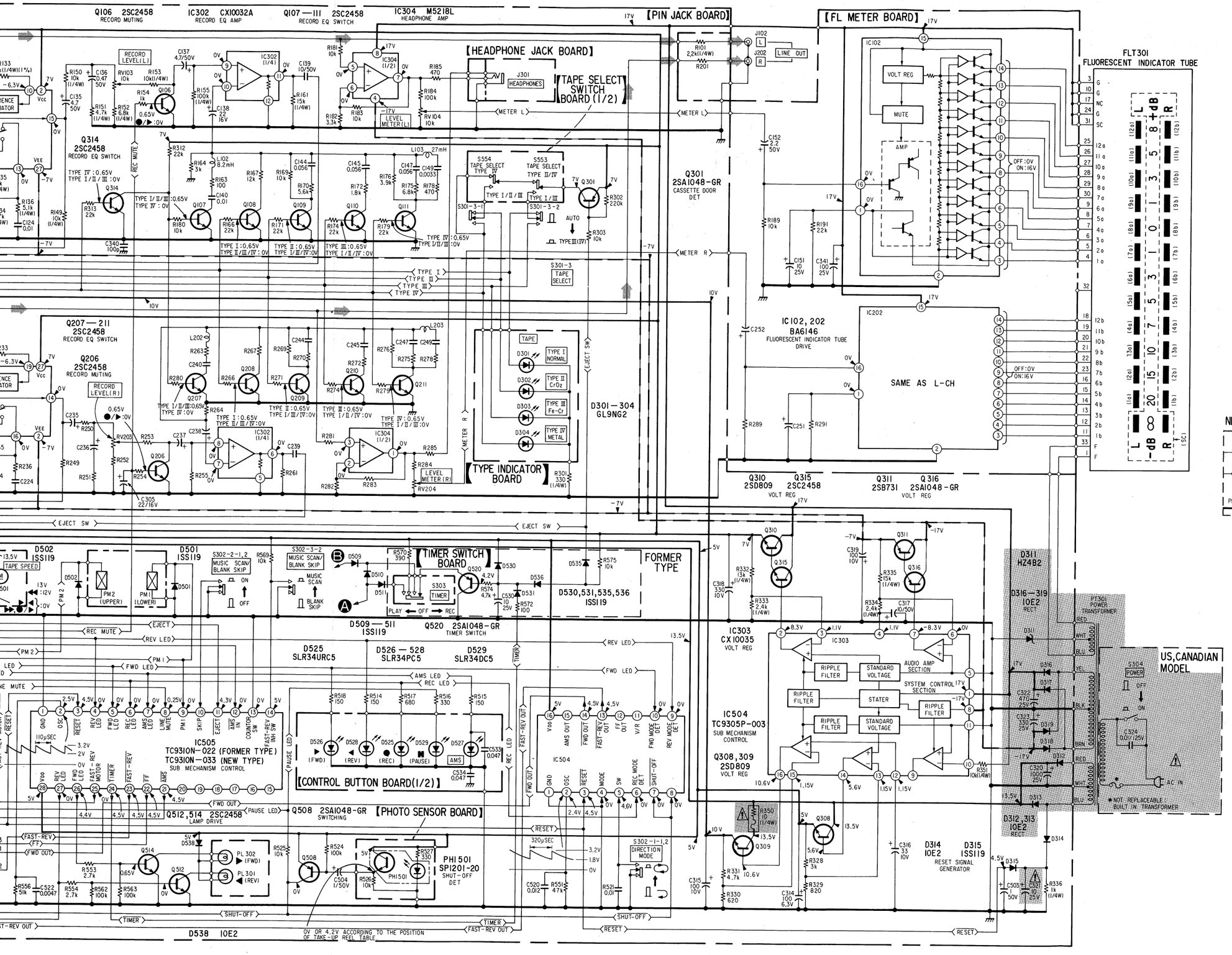







FORMER TYPE
NEW TYPE
【REMOTE CONTROL BOARD】
【TIMER SWITCH BOARD】
【HEADPHONE JACK BOARD】
【FL METER BOARD】
【CONTROL BUTTON BOARD】
【PHOTO SENSOR BOARD】
【ERASE HEAD BOARD】
【HEAD TRANSLATION BOARD】
【TAPE SELECT SWITCH BOARD】
【TYPE INDICATOR BOARD】
PLAYBACK SIGNAL
0V OR 4.2V ACCORDING TO THE POSITION OF TAKE-UP REEL TABLE.
TAPE SELECT
DOLBY NR
MUSIC SCAN/ BLANK SKIP
DIRECTION MODE
D535 AND R575 ARE MOUNTED ON FORMER TYPE ONLY.


【AUDIO BOARD】
L-CH
R-CH
IC301 CX10033A MIC AMP/BUFFER AMP
Q101 2SC2458 PLAYBACK EQ SWITCH
Q103 2SC2458 MPX FILTER SWITCH
Q104 2SC2001 PLAYBACK MUTING
IC101 CX20027 DOLBY
Q106 2SC2458 RECORD MUTING
IC302 CX10032A RECORD EQ AMP
Q107 — 111 2SC2458 RECORD EQ SWITCH
IC304 M52
HEADPHONE AM
【VOLUME BOARD (1/2)】
IC302 CX10032A PLAYBACK EQ AMP
Q314 2SC2458 RECORD EQ SWITCH
Q203 2SC2458 MPX FILTER SWITCH
Q307 2SC2458 RELAY DRIVE
Q201 2SC2458 PLAYBACK EQ SWITCH
Q313 2SC2458 PLAYBACK EQ SWITCH
IC201 CX20028 DOLBY
Q207 — 211 2SC2458 RECORD EQ SWITCH
Q206 2SC2458 RECORD MUTING
Q204 2SC2001 PLAYBACK MUTING
Q302,303 2SC945-P RECORD BIAS OSC
Q304 2SC945-P BIAS OSC SWITCH
Q305 2SA1048-GR BIAS OSC SWITCH CONTROL
Q306 2SC2458
D305 — 308 1SS119
D309 HZ9A2L
Q515,516 2SC2458 SWITCHING
D513,537 1SS119
【TAPE SELECT SWITCH BOARD (1/2)】
D506 1SS119
Q506 2SA1048-GR LINE MUTE DRIVE
D507,508 1SS119
Q510 2SC2458 SWITCHING
Q501 — 503 2SC2458 MOTOR DRIVE
D502 1SS119
D501 1SS119
D504,505 1SS119
D525 SLR34URC5
D526 — 528 SLR34PC5
D509 — 511 1SS119
【REMOTE CONTROL BOARD】
IC502 CX10034 REMOTE CONTROL DET/AMS AMP
D534 1SS119
【CONTROL BUTTON BOARD (1/2)】
IC501 TC9310N-021(FORMER TYPE) TC9310N-032(NEW TYPE) MECHANISM CONTROL
IC505 TC9310N-022 (FORMER TYPE) TC9310N-033 (NEW TYPE) SUB MECHANISM CONTROL
Q512,514 2SC2458 LAMP DRIVE
Q508 2SA1048-GR 【PHOTO SENSO
SWITCHING
D518,519,522,523,524 1SS119
D533 1SS119
D538 10E2
D524 RESET
D523 D518
D522 D519
PL 302 (FWD)
PL 301 (REV)
PH501
M501 TAPE SPEED
PM2 (UPPER)
PM1 (LOWER)
REFERENCE GENERATOR
HIGH LEVEL STAGE CONTROL
LOW LEVEL STAGE CONTROL
MODE CONTROL
REC MUTE
EJECT SW
SHUT-OFF
FAST-REV OUT
TIMER
FWD OUT
PAUSE LED
REC LED
FWD LED
AMS LED
LINE MUTE
REV LED
TYPE I
TYPE II
TYPE III
TYPE IV
DOLBY NR
C-TYPE
B-TYPE
ON
OFF
NO TAB
TAB
JACK
PLAY
REMOTE
CNP305
HRP301 PA242-3602
HE301 ES237-36
T301
L101 33mH
L201
L301 470μH
L202
L203
L204
L205
L206
L207
L208
L209
L210
L211
RECORD BIAS
BUFFER AMP
RECORD LEVEL(L)
RECORD LEVEL(R)
REC LEVEL (L)
REC LEVEL (R)
PLAYBACK LEVEL (L)
PLAYBACK LEVEL (R)
DOLBY NR
DOLBY ON: 0.65V
DOLBY OFF: 0V
DOLBY OFF:7V
DOLBY B:7V
DOLBY C:0V
DOLBY OFF:-7V
DOLBY B:-7V
DOLBY C:-4.1V
TYPE I:7.3V AC
TYPE II:9.2V AC
TYPE III:7.9V AC
TYPE IV:13V AC
TYPE I:15V AC
TYPE II:19.5V AC
TYPE III:16.5V AC
TYPE IV:25.5V AC
TYPE I:60V AC
TYPE II:78V AC
TYPE III:64V AC
TYPE IV:100V AC
TYPE I:0.65V
TYPE II/III/IV:0.65V
TYPE I/II/III:0V
TYPE IV:0V
TYPE I:0.65V
TYPE II/III/IV:0V
TYPE II:0.65V
TYPE I/III/IV:0V
TYPE III:0.65V
TYPE I/II/IV:0V
TYPE IV:0.65V
TYPE I/II/III:0V
TYPE I:-0.3V
TYPE II:1.8V
TYPE III:0.25V
TYPE IV:4.4V
TYPE I:0.3V
TYPE II:2.4V
TYPE III:0.85V
TYPE IV:5.1V
AMS SIG
BIAS
EJECT
REC MUTE
REV LED
FWD LED
AMS LED
LINE MUTE
PM1
PM2
REC LED
PAUSE LED
FAST-REV
FWD OUT
TIMER
SHUT-OFF
RESET
0V OR 4.2V ACCORDING TO THE POSITION OF TAKE-UP REEL TABLE



FORMER TYPE SERIAL

US Model: 800,001 -
Canadian Model: 700,001 -
AEP Model: 500,001 -
UK Model: not produ
E1 Model: 300,001 -
E2 Model: 400,001 -

NEW TYPE SERIAL No.

US Model: 800,701 a
Canadian Model: 701,401 a
AEP Model: 502,401 a
UK Model: 600,001 a
E1 Model: 300,201 a
E2 Model: 400,201 a

Z | A1 | B1 | C1

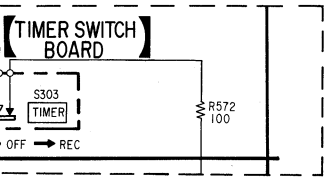
FORMER TYPE SERIAL No.

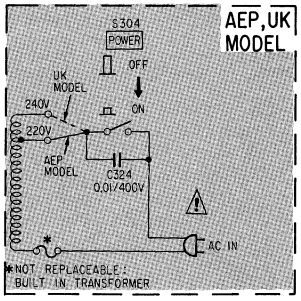
US Model: 800,001 – 808,700
Canadian Model: 700,001 – 701,400
AEP Model: 500,001 – 502,400
UK Model: not produced
E1 Model: 300,001 – 300,200
E2 Model: 400,001 – 400,200

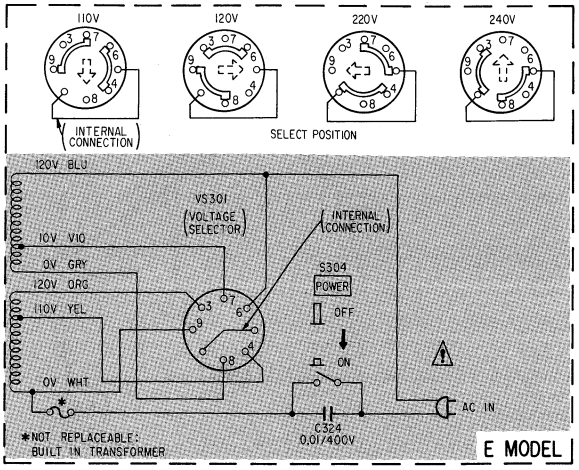
NEW TYPE SERIAL No.

US Model: 800,701 and later
Canadian Model: 701,401 and later
AEP Model: 502,401 and later
UK Model: 600,001 and later
E1 Model: 300,201 and later
E2 Model: 400,201 and later

YPE







Note:

- ➡ : signal path
- Components for right channel have same values as for left channel.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/6 W unless otherwise noted. kΩ: 1000 Ω, MΩ: 1000 kΩ
- ⏦ : fusible resistor.
- ▭ : adjustment for repair.
- ——: B+ bus.
- – – –: B– bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM.

  no mark : STOP
  ▶ : FWD
  ◀ : REV
  ▶▶ : FF
  ◀◀ : FAST-REVERSE
  ● : REC
  ●/▶ : REC/FWD
- AC voltage readings in the bias oscillator with a VTVM.
- Switch

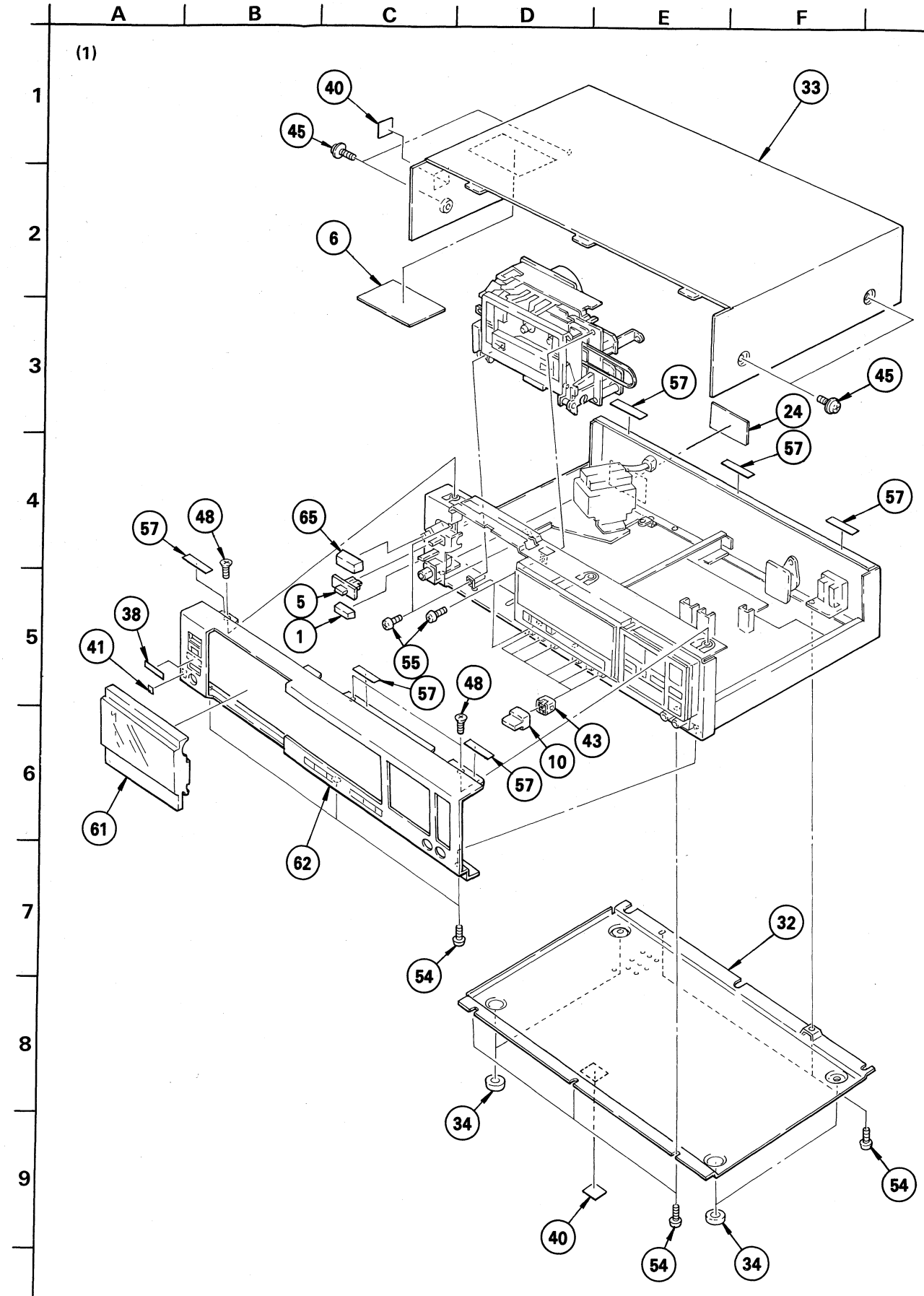
Ref. No.	Switch	Position
S301-1	DOLBY NR (ON/OFF)	OFF
S301-2	DOLBY NR (B-TYPE/C-TYPE)	B-TYPE
S301-3	TAPE SELECT	AUTO
S302-1	DIRECTION MODE	⮌
S302-2	MUSIC SCAN/BLANK SKIP (ON/OFF)	OFF
S302-3	MUSIC SCAN/BLANK SKIP (BLANK SKIP/MUSIC SCAN)	BLANK SKIP
S303	TIMER	OFF
S304	POWER	OFF
S501	◀◀ (FAST-REV)	OFF
S502	■ (STOP)	OFF
S503	▶ (FWD)	OFF
S504	▶▶ (FF)	OFF
S505	◀ (REV)	OFF
S506	● REC	OFF
S507	▮▮ PAUSE	OFF
S508	○ REC MUTE	OFF
S509	AMS	OFF
S551	EJECT	ON
S552	ERASE PROOF	NO TAB
S553	TAPE SELECT	TYPE II/IV
S554	TAPE SELECT	TYPE IV

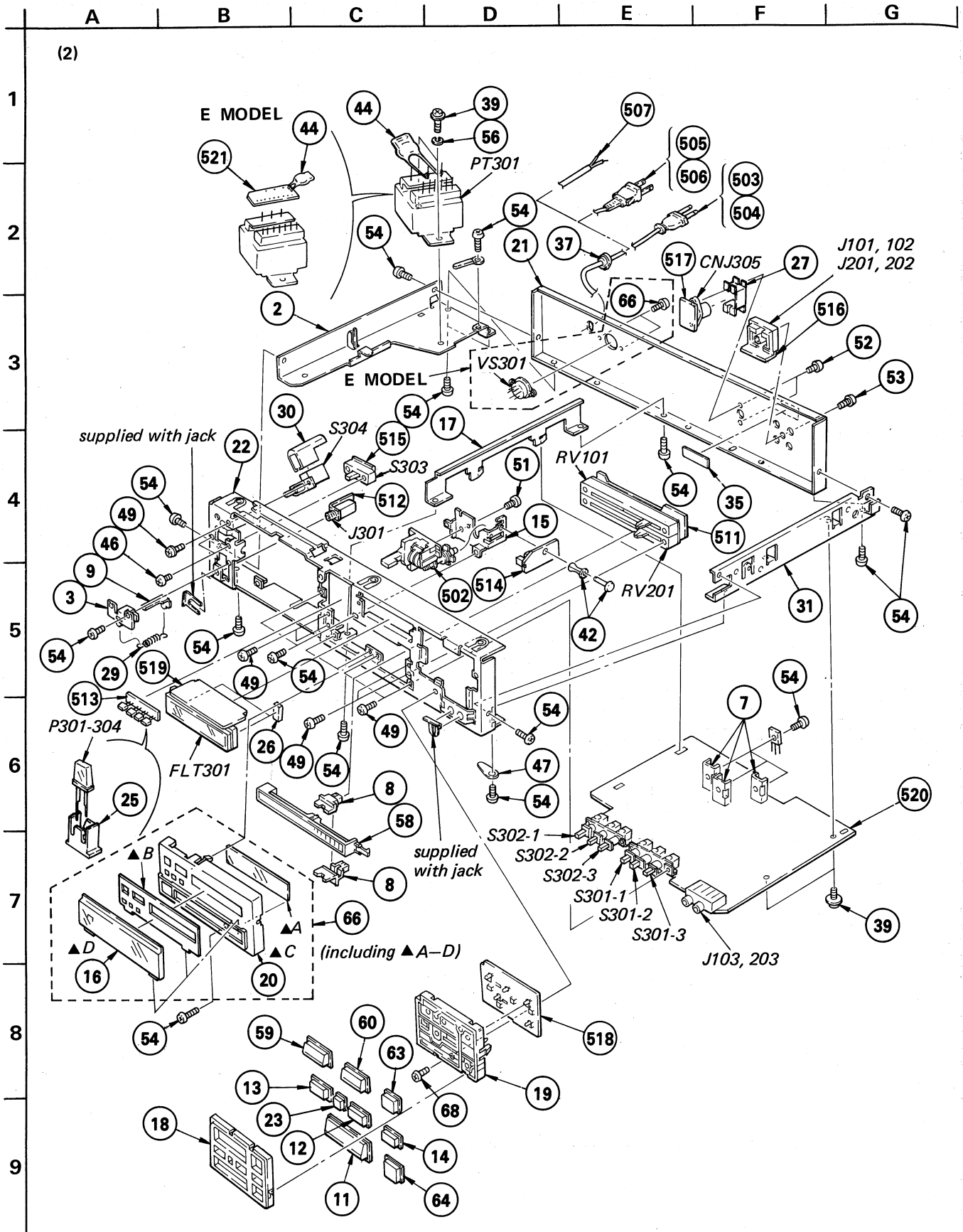
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

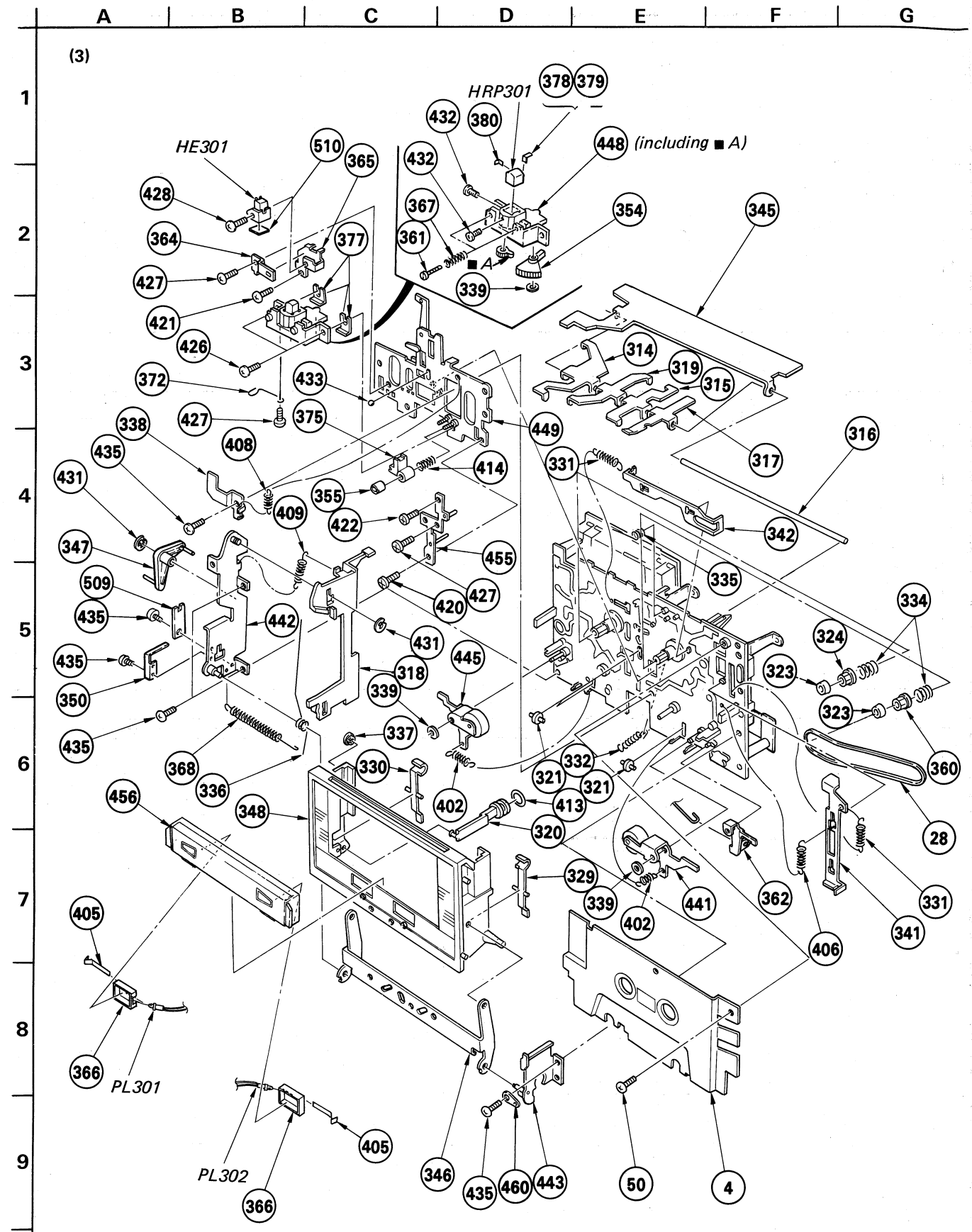
Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

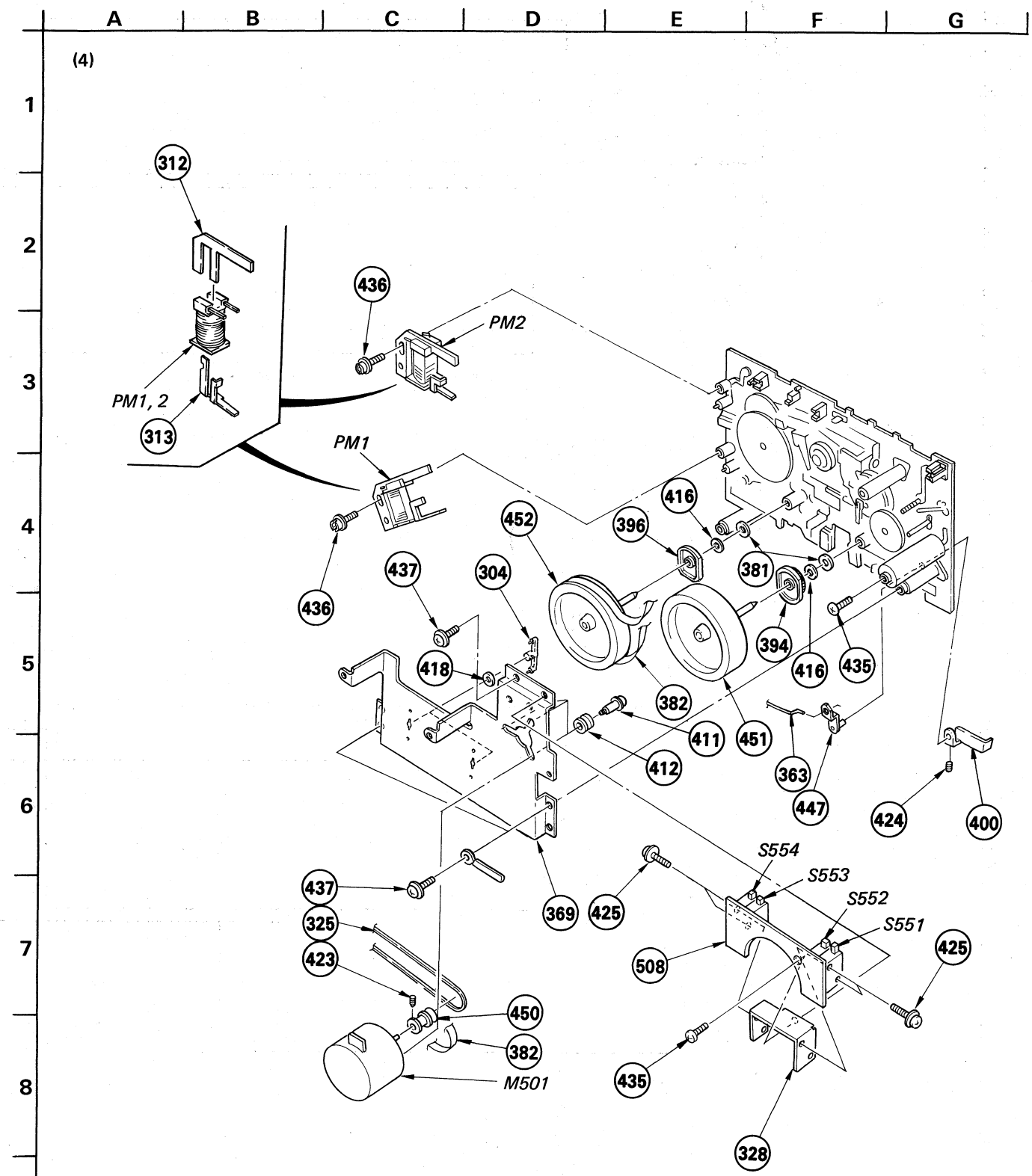
Note: Voltages are measured with a VOM (50kΩ/V).

SECTION 5
EXPLODED VIEWS AND PARTS LIST




A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
(2)
E MODEL
PT301
VS301
E MODEL
CNJ305
J101, 102
J201, 202
supplied with jack
S304
S303
J301
RV101
RV201
P301-304
FLT301
supplied with jack
S302-1
S302-2
S302-3
S301-1
S301-2
S301-3
J103, 203
▲A
▲B
▲C
▲D
(including ▲A–D)


(3)
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
HRP301
HE301
PL301
PL302
■ A
(including ■ A)
378
379
432
380
448
510
365
428
367
354
345
364
377
361
427
339
421
314
426
319
372
433
315
427
375
449
316
338
408
414
317
435
331
431
355
342
409
422
347
455
509
420
427
335
435
442
431
334
324
435
445
318
323
350
339
323
435
337
368
336
330
321
332
321
360
456
348
402
413
320
28
329
339
441
362
331
405
402
406
341
366
346
435
460
443
50
4
405
366
—35—


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
(4)
312
313
PM1, 2
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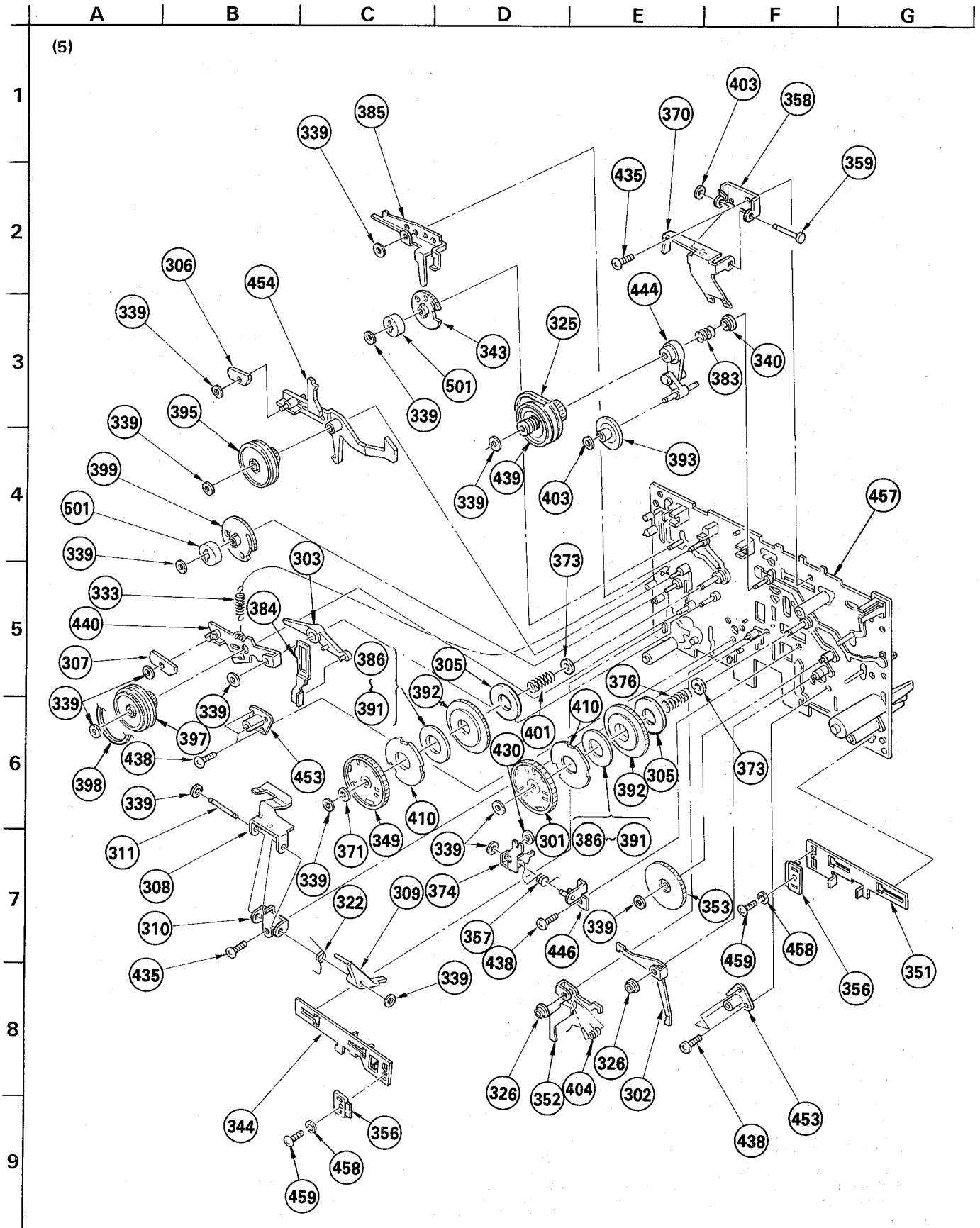
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GENERAL SECTION

No.	Part No.	Description
1	3-304-419-00	BUTTON, EJECT
2 ♦	3-304-423-00	PLATE, SIDE, LEFT
3 ♦	3-307-517-00	GUIDE, SLIDER
4	3-307-533-11	PLATE, ORNAMENTAL, MD
5	3-307-538-51	KNOB, TIMER
6	3-307-563-01	SHEET, VIBRATION PROOF
7 ♦	3-312-615-31	HEAT SINK
8	3-313-213-11	BUTTON, REC CONTROL
9 ♦	3-315-102-00	PLATE, SLIDE
10	3-315-105-00	KNOB (5X16), SQUARE
11	3-315-112-11	BUTTON, STOP
12	3-315-113-11	BUTTON, FF
13	3-315-114-11	BUTTON, REW
14	3-315-117-11	BUTTON, REC MUTE
15 ♦	3-315-118-00	BRACKET, COUNTER
16	3-315-119-11	WINDOW, METER
17 ♦	3-315-120-00	PLATE, RELAY
18	3-315-121-21	ESCUTCHEON, CONTROL BUTTON
19 ♦	3-315-122-00	HINGE, CONTROL BUTTON
20	3-315-124-00	ESCUTCHEON, METER
21 ♦	3-315-125-31	(US,Canadian)...PLATE, JACK
21 ♦	3-315-125-42	(AEP,UK).....PLATE, JACK
21 ♦	3-315-125-52	(E).....PLATE, JACK
22 ♦	3-315-127-00	CHASSIS, AMPLIFIER
23	3-315-132-00	BUTTON, AMS
24	3-315-138-00	(AEP).....LABEL, MODEL NUMBER
24	3-315-139-00	(UK).....LABEL, MODEL NUMBER
24	3-315-140-00	(E).....LABEL, MODEL NUMBER
24	3-315-141-00	(US,Canadian)...LABEL, MODEL NUMBER
25 ♦	3-315-146-00	HOLDER, LED
26	3-315-153-00	CUSHION
27 ♦	3-315-156-00	SPACER, REMOTE CONTROL
28	3-538-025-XX	BELT, COUNTER
29	3-540-244-00	SPRING, TENSION
30	3-575-524-00	COVER, POWER SWITCH
31 ♦	3-575-529-11	PLATE, SIDE, RIGHT
32 ♦	3-575-538-31	PLATE, BOTTOM
33	3-575-539-00	CASE
34	3-576-731-11	FELT (H)
35	3-701-030-00	LABEL, SERIAL NUMBER
36	3-701-360-00	(AEP)....LABEL, TACK
37	3-701-682-00	(US,Canadian,E)...STOPPER, CORD
37	3-703-244-00	(AEP,UK)...BUSHING, CORD
38	3-701-690-00	(UK).....LABEL, MADE IN JAPAN
39	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6
40 ♦	3-703-680-00	(US)....LABEL, CAUTION, SUB, NEW UL

GENERAL SECTION

No.	Part No.	Description
41	3-703-710-01	STICKER, SONY SYMBOL (12)
42	4-812-134-00	RIVET NYLON, 3.5
43	4-864-307-00	RING
44	4-875-455-01	(AEP,UK,E)...COVER, CAPACITOR
45	4-889-321-01	SCREW
46	7-621-770-87	SCREW +P 2.6X5
47	7-623-508-01	LUG, 3
48	7-682-247-13	SCREW +K 3X6
49	7-682-646-01	SCREW +PS 3X5
50	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT
51	7-685-533-21	SCREW +BTP 2.6X6 TYPE2 SLIT
52	7-685-550-19	SCREW +BTP 3X16 TYPE2 N-S
53	7-685-647-29	SCREW +BVTP 3X10 TYPE2 SLIT
54	7-685-871-01	SCREW +BVTT 3X6 (S)
55	7-685-871-09	SCREW +BVTT 3X6 (S)
56	7-688-004-11	W 4, MIDDLE
57	9-911-837-XX	CUSHION (B), FILTER
58	X-3315-105-0	PLATE ASSY, ORNAMENTAL
59	X-3315-107-0	BUTTON ASSY, FWD
60	X-3315-108-0	BUTTON ASSY, REV
61	X-3315-110-0	WINDOW ASSY, CASSETTE
62	X-3315-111-0	PANEL ASSY, FRONT
63	X-3315-113-0	BUTTON ASSY, REC
64	X-3315-114-0	BUTTON ASSY, PAUSE
65	X-3575-502-0	KNOB ASSY, POWER
66	X-3315-117-1	ESCUTCHEON ASSY, METER

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UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
101	1-551-734-11	CORD, CONNECTION (RK- 74A)
102	3-315-149-00	CUSHION (LEFT), LOWER
103	3-315-150-00	CUSHION (RIGHT), LOWER
104	3-315-151-00	CUSHION (LEFT), UPPER
105	3-315-152-00	CUSHION (RIGHT), UPPER
106	3-315-154-00	INDIVIDUAL CARTON
107	3-573-625-00	SHEET, POLYETHYLENE
108	3-701-630-00	BAG, POLYETHYLENE
109	3-773-486-11	(AEP,UK,Canadian,E)...MANUAL, INSTRUCTION
110	3-773-486-21	(US)....MANUAL, INSTRUCTION
111	3-773-486-41	(AEP)...MANUAL, INSTRUCTION
112	3-793-828-11	QUESTIONNAIRE
113	8-890-454-10	(Canadian)....TAPE (UCX-S)
114	X-3701-105-0	ROD ASSY, CLEANING, HEAD

MECHANISM SECTION

No.	Part No.	Description
301	3-307-305-02	GEAR (T), REEL
302 ♦	3-307-306-00	LEVER, SELECT, REVERSE
303	3-307-307-00	LEVER, FWD
304	3-307-309-00	RETAINER (A), THRUST
305	3-307-313-00	PLATE, YOKE
306	3-307-315-00	ARBOR, MOVABLE
307	3-307-315-01	ARBOR, MOVABLE
308	3-307-319-00	RETAINER, TAKE-UP GEAR
309	3-307-328-00	LEVER, TAKE-UP SELECTION
310 ♦	3-307-329-00	PLATE, FULCRUM,SELECTION LEVER
311	3-307-330-00	PIN, FULCRUM PLATE
312	3-307-332-00	ARBOR, FIXED
313	3-307-333-00	ARBOR, TRIGGER
314 ♦	3-307-337-00	LEVER, REC DETECTION
315 ♦	3-307-338-00	LEVER, METAL DETECTION
316 ♦	3-307-339-00	SHAFT, DETECTION LEVER
317 ♦	3-307-344-00	LEVER, HALF RETAINER
318	3-307-345-00	SLIDER, EJECT
319 ♦	3-307-346-00	LEVER, DETECTION
320	3-307-347-00	PISTON
321	3-307-348-00	ROLLER
322	3-307-355-00	SPRING
323	3-307-362-00	CAP, REEL
324	3-307-363-00	CLAW (N), REEL
325	3-307-366-00	BELT, FAST FORWARD
326	3-307-367-00	BUSHING, SELECT LEVER
327	.....	
328 ♦	3-307-370-00	BRACKET, SWITCH
329	3-307-371-00	SPRING (LEFT)
330	3-307-372-00	SPRING (RIGHT)
331	3-307-374-00	SPRING, TENSION
332	3-307-375-00	SPRING, TENSION
333	3-307-378-00	SPRING, TENSION
334	3-307-380-00	SPRING, COMPRESSION
335	3-307-382-00	SPRING
336	3-307-383-00	SPRING
337	3-307-390-00	BUSHING, LOADING SPRING
338	3-307-391-00	SPRING
339	3-307-394-00	RETAINER (B), THRUST
340	3-307-395-00	RETAINER, SPRING
341	3-307-397-00	SLIDER, PAUSE
342 ♦	3-307-399-00	SLIDER, MODE
343	3-307-401-00	GEAR, FF CAM
344 ♦	3-307-403-04	SLIDER, FWD
345 ♦	3-307-404-00	RETAINER, DETECTION SWITCH

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MECHANISM SECTION

No.	Part No.	Description
346 ♦	3-307-405-00	PLATE, FULCRUM,CASSETTE HOLDER
347	3-307-406-00	LEVER, EJECT
348	3-307-407-31	HOLDER, CASSETTE
349	3-307-412-00	GEAR, TAKE-UP REEL
350	3-307-416-00	STOPPER, LOADING
351 ♦	3-307-420-03	SLIDER, REVERSE
352 ♦	3-307-421-00	LEVER (R), FWD SELECTION
353	3-307-423-02	GEAR (S), DRIVING
354	3-307-427-00	GEAR, HEAD, ROTARY
355	3-307-435-00	NUT, ADJUSTMENT, TAPE GUIDE
356 ♦	3-307-437-02	BLOCK, HEAD SELECTION
357	3-307-441-00	SPRING
358 ♦	3-307-443-00	BRACKET, RETAINER, SUPPLY GEAR
359 ♦	3-307-445-00	SHAFT, RETAINER, SUPPLY GEAR
360	3-307-447-00	CLAW (R), REEL
361	3-307-448-00	SCREW, ADJUSTMENT, AZIMUTH
362 ♦	3-307-449-00	LEVER (R), PAUSE
363 ♦	3-307-450-02	ROD, PULL, PAUSE
364	3-307-457-00	SPRING
365	3-307-458-00	PLATE (L), ADJUSTMENT, HEAD
366	3-307-459-00	RUBBER, HOLDER
367	3-307-460-00	SPRING, COMPRESSION
368	3-307-461-00	SPRING, TENSION
369 ♦	3-307-462-00	RETAINER (R), THRUST
370 ♦	3-307-464-00	RETAINER, SUPPLY GEAR
371	3-307-465-00	RETAINER, T SIDE
372 ♦	3-307-466-00	CLAMP
373 ♦	3-307-467-00	RETAINER, SPRING
374	3-307-469-00	LEVER, SELECTION, SUPPLY
375	3-307-470-00	GUIDE (R), TAPE
376	3-307-471-31	SPRING, COMPRESSION
377	3-307-477-01	SEIM (A), HEAD ADJUSTMENT
377	3-307-477-11	SEIM (A), HEAD ADJUSTMENT
377	3-307-477-21	SEIM (A), HEAD ADJUSTMENT
377	3-307-477-31	SEIM (A), HEAD ADJUSTMENT
377	3-307-477-41	SEIM (A), HEAD ADJUSTMENT
378	3-307-479-01	SEIM (B), HEAD ADJUSTMENT
378	3-307-479-11	SEIM (B), HEAD ADJUSTMENT
378	3-307-479-21	SEIM (B), HEAD ADJUSTMENT
378	3-307-479-31	SEIM (B), HEAD ADJUSTMENT
379	3-307-480-02	SEAM, HEAD
380	3-307-481-00	BASE, HEAD
381	3-307-482-00	WASHER, LUMILER
382	3-307-483-00	BELT (R), CAPSTAN
383	3-312-452-00	SPRING, COMPRESSION
384 ♦	3-307-487-11	STOPPER, FR
385 ♦	3-307-490-00	LEVER, FF

MECHANISM SECTION

No.	Part No.	Description
386	3-307-493-01	SPACER
387	3-307-493-11	SPACER
388	3-307-493-21	SPACER
389	3-307-493-31	SPACER
390	3-307-493-41	SPACER
391	3-307-493-51	SPACER
392	3-307-953-00	MAGNET, REEL TABLE
393	3-307-970-00	GEAR, FR
394 ♦	3-312-403-00	GEAR (S), PINION
395	3-312-405-00	PULLEY, DRIVING
396	3-312-406-00	GEAR (T), PINION
397	3-312-408-00	GEAR (B), CONVERSION
398	3-312-409-00	BELT, DRIVING
399	3-312-412-00	GEAR (B), CAM, FWD
400 ♦	3-312-428-00	ARM (B), PUASE
401	3-312-430-00	SPRING, COMPRESSION
402	3-312-432-00	SPRING, TENSION
403	3-312-434-00	WASHER, SLIT
404	3-312-442-00	SPRING
405	3-312-444-00	RETAINER, LAMP
406	3-312-448-00	SPRING, TENSION
407	.....	
408	3-312-451-00	SPRING, TENSION
409	3-531-541-00	SPRING, TENSION
410	3-561-827-11	PLATE (A), HYSTERESIS
411	3-570-027-00	SCREW, MOTOR
412	3-570-118-00	CUSHION, MOTOR
413	3-575-392-00	RING, PISTON
414	3-644-718-00	SPRING, COMPRESSION
415	.....	
416	3-701-438-11	WASHER, 2.5
417	.....	
418	3-701-443-21	WASHER, 5
419	.....	
420	3-701-467-00	SCREW, LOCK
421	7-621-255-20	SCREW +P 2X4
422	7-621-555-35	SCREW +K 2X5
423	7-621-732-08	SET-SCT, HEX 2X3 FLAT POINT
424	7-621-733-08	SET-SCT, HEX 2X4 FLAT POINT
425	7-621-760-05	+PSW, 2.6X16
426	7-621-770-87	SCREW +P 2.6X5
427	7-621-772-00	SCREW +B 2X3
428	7-621-772-40	SCREW +B 2X8
429	7-621-775-15	SCREW +B 2.6X4
430	7-623-922-01	WASHER 2.0, NYLONE

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MECHANISM SECTION

No.	Part No.	Description
431	7-624-105-04	STOP RING 2.3, TYPE -E
432	7-627-552-07	SCREW, PRECISION +P 1.7X2.5
433	7-671-111-11	STEEL, BOUL 1.5MM
434	7-685-851-01	SCREW +BVTT 2X4 (S)
435	7-685-860-04	SCREW +BVTT 2.6X4 (S)
436	7-687-204-21	TOTSU PTPWH 2X6 NON-SLIT, TYPE2
437	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
438	7-687-701-39	SCREW, TOTSU BTT 2.6X4
439	A-2142-022-A	PULLEY ASSY, FR
440 ♦	X-3307-305-0	LEVER ASSY, FWD LOCK
441	X-3307-307-6	PINCH ROLLER (N) ASSY
442 ♦	X-3307-309-0	PLATE (LEFT) ASSY, SIDE
443 ♦	X-3307-310-0	PLATE (RIGHT) ASSY, SIDE
444	X-3307-312-0	LEVER ASSY, FR
445	X-3307-316-3	PINCH ROLLER (R) ASSY
446 ♦	X-3307-317-3	PLATE ASSY, FULCRUM, LEVER
447 ♦	X-3307-319-0	ARM (A) ASSY, PAUSE
448	X-3307-321-0	HOLDER ASSY, HEAD
449	X-3307-323-0	CHASSIS (R) ASSY, HEAD
450	X-3307-329-0	PULLEY (R) ASSY, MOTOR
451	X-3307-336-2	FLYWHEEL (RS) ASSY
452	X-3307-337-2	FLYWHEEL (RT) ASSY
453	X-3307-338-0	BEARING ASSY, CAPSTAN
454	X-3307-348-0	LEVER ASSY, FF LOCK
455	X-3307-920-0	PLATE ASSY, ADJUSTMENT
456	X-3307-352-1	PLATE ASSY, DILECTION
457	X-3307-331-2	CHASSIS ASSY, MECHANISM
458	7-623-205-22	WASHER, SPRING, 2MM DIA
459	7-685-781-01	SCREW, +PTT 2X4
460	7-623-508-01	LUG, 3

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
501	1-452-202-00	MAGNET			
502	1-548-574-00	COUNTER, TAPE (NORMAL TYPE)			
503 ⚠	1-534-817-XX	(AEP).....CORD, POWER			
504 ⚠	1-551-472-00	(E2).....CORD, POWER			
505 ⚠	1-551-506-XX	(US,Canadian)...CORD, POWER			
506 ⚠	1-556-734-21	(E1).....CORD, POWER			
507 ⚠	1-556-035-00	(UK).....CORD, POWER			
508 ♦	1-611-188-00	PC BOARD, TAPE SELECT SWITCH			
509 ♦	1-608-170-00	PC BOARD, HEAD TRANSLATION			
510 ♦	1-608-268-00	PC BOARD, ERASE HEAD			
511 ♦	1-609-914-31	PC BOARD, VOLUME			
512 ♦	1-609-915-31	PC BOARD, HEADPHONE JACK			
513 ♦	1-609-916-31	PC BOARD, TYPE INDICATOR			
514 ♦	1-609-917-31	PC BOARD, PHOTO SENSOR			
515 ♦	1-609-918-31	PC BOARD, TIMER SWITCH			
516 ♦	1-609-920-31	PC BOARD, PIN JACK			
517 ♦	1-609-921-31	PC BORAD, REMOTE CONTROL			
518 ♦	1-609-922-00	PC BOARD, CONTROL BUTTON			
519 ♦	1-609-923-00	PC BOARD, FL METER			
520 ♦	A-2056-204-A	PC BOARD ASSY, AUDIO			
C103	1-123-354-00	ELECT	3.3MF	20%	50V
C104	1-102-106-00	CERAMIC	100PF	10%	50V
C105	1-123-354-00	ELECT	3.3MF	20%	50V
C106	1-102-106-00	CERAMIC	100PF	10%	50V
C107	1-123-380-00	ELECT	1MF	20%	50V
C108	1-161-271-00	CERAMIC	100PF	5%	50V
C109	1-123-356-00	ELECT	10MF	20%	50V
C110	1-161-326-00	CERAMIC	0.0022MF	30%	50V
C111	1-107-165-00	MICA	56PF	5%	500V
C112	1-161-321-00	CERAMIC	680PF	10%	50V
C113	1-107-036-00	MICA	68PF	5%	500V
C114	1-130-624-00	FILM	0.022MF	5%	50V
C116	1-123-354-00	ELECT	3.3MF	20%	50V
C117	1-108-571-00	MYLAR	0.0047MF	5%	50V
C118	1-161-316-00	CERAMIC	270PF	10%	50V
C119	1-124-185-00	ELECT	4.7MF	20%	50V
C122	1-130-620-00	FILM	0.01MF	5%	50V
C123	1-130-622-00	FILM	0.015MF	5%	50V
C124	1-130-620-00	FILM	0.01MF	5%	50V
C125	1-130-633-00	FILM	0.12MF	5%	50V
C126	1-123-380-00	ELECT	1MF	20%	50V
C127	1-130-633-00	FILM	0.12MF	5%	50V
C128	1-130-637-00	FILM	0.27MF	5%	50V
C129	1-130-635-00	FILM	0.18MF	5%	50V

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

TC-FX505R

FORMER TYPE SERIAL NO.		NEW TYPE SERIAL NO.	
US Model:	800,001 — 808,700	US Model:	808,701 and Later
Canadian Model:	700,001 — 701,400	Canadian Model:	701,401 and Later
AEP Model:	500,001 — 502,400	AEP Model:	502,401 and Later
UK Model:	Not Produced	UK Model:	600,001 and Later
E1 Model:	300,001 — 300,200	E1 Model:	300,201 and Later
E2 Model:	400,001 — 400,200	E2 Model:	400,201 and Later

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C130	1-130-630-00	FILM	0.068MF	5%	50V
C131	1-123-380-00	ELECT	1MF	20%	50V
C132	1-130-625-00	FILM	0.027MF	5%	50V
C133	1-130-635-00	FILM	0.18MF	5%	50V
C134	1-130-630-00	FILM	0.068MF	5%	50V
C135	1-123-369-00	ELECT	4.7MF	20%	50V
C136	1-123-351-00	ELECT	0.47MF	20%	50V
C137	1-123-369-00	ELECT	4.7MF	20%	50V
C138	1-123-317-00	ELECT	22MF	20%	16V
C139	1-124-186-00	ELECT	10MF	20%	50V
C140	1-130-620-00	FILM	0.01MF	5%	50V
C144	1-130-629-00	FILM	0.056MF	5%	50V
C145	1-130-629-00	FILM	0.056MF	5%	50V
C147	1-130-629-00	FILM	0.056MF	5%	50V
C149	1-108-567-00	MYLAR	0.0033MF	5%	50V
C150	1-161-318-00	CERAMIC	390MF	10%	50V
C151	1-123-356-00	ELECT	10MF	20%	25V
C152	1-123-353-00	ELECT	2.2MF	20%	50V
C301	1-123-308-00	ELECT	220MF	20%	10V
C302	1-123-308-00	ELECT	220MF	20%	10V
C303	1-123-356-00	ELECT	10MF	20%	50V
C304	1-123-369-00	ELECT	4.7MF	20%	50V
C305	1-123-317-00	ELECT	22MF	20%	16V
C306	1-129-714-00	FILM	0.01MF	10%	630V
C307	1-123-369-00	ELECT	4.7MF	20%	50V
C308	1-130-295-00	FILM	0.0082MF	5%	100V
C309	1-130-291-00	FILM	0.0056MF	5%	100V
C310	1-130-291-00	FILM	0.0056MF	5%	100V
C311	1-123-351-00	ELECT	0.47MF	20%	50V
C312	1-161-330-00	CERAMIC	0.01MF	30%	25V
C313	1-123-356-00	ELECT	10MF	20%	50V
C314	1-123-295-00	ELECT	100MF	20%	6.3V
C315	1-123-307-00	ELECT	100MF	20%	10V
C316	1-123-305-00	ELECT	33MF	20%	10V
C317	1-123-356-00	ELECT	10MF	20%	50V
C318	1-123-309-00	ELECT	330MF	20%	10V
C319	1-123-307-00	ELECT	100MF	20%	10V
C320 ⚠	1-123-337-00	ELECT	1000MF	20%	25V
C321 ⚠	1-123-356-00	ELECT	10MF	20%	25V
C322 ⚠	1-123-336-00	ELECT	470MF	20%	25V
C323 ⚠	1-123-335-00	ELECT	330MF	20%	25V
C324 ⚠	1-161-744-00	(AEP,UK,E).....CERAMIC	0.01MF		400V
C324 ⚠	1-161-749-00	(US,Canadian)...CERAMIC	0.01MF		125V
C325	1-161-330-00	CERAMIC	0.01MF	30%	25V
C326	1-123-369-00	ELECT	4.7MF	20%	50V
C336	1-102-106-00	CERAMIC	100PF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C337	1-102-106-00	CERAMIC	100PF	10%	50V
C338	1-102-106-00	CERAMIC	100PF	10%	50V
C340	1-161-271-00	CERAMIC	100PF	5%	50V
C341	1-123-333-00	ELECT	100MF	20%	25V
C502	1-108-571-00	MYLAR	0.0047MF	5%	50V
C503	1-123-380-00	ELECT	1MF	20%	50V
C504	1-123-380-00	ELECT	1MF	20%	50V
C505	1-161-330-00	CERAMIC	0.01MF	30%	25V
C506	1-161-330-00	CERAMIC	0.01MF	30%	25V
C507	1-161-330-00	CERAMIC	0.01MF	30%	25V
C508	1-161-330-00	CERAMIC	0.01MF	30%	25V
C509	1-161-330-00	CERAMIC	0.01MF	30%	25V
C510	1-161-330-00	CERAMIC	0.01MF	30%	25V
C511	1-161-330-00	CERAMIC	0.01MF	30%	25V
C512	1-161-330-00	CERAMIC	0.01MF	30%	25V
C513	1-161-330-00	CERAMIC	0.01MF	30%	25V
C514	1-123-380-00	ELECT	1MF	20%	50V
C515	1-161-323-00	CERAMIC	0.001MF	10%	50V
C516	1-161-323-00	CERAMIC	0.001MF	10%	50V
C517	1-123-607-00	ELECT	0.1MF	20%	50V
C520	1-130-621-00	FILM	0.012MF	5%	50V
C521	1-130-620-00	FILM	0.01MF	5%	50V
C522	1-108-571-00	MYLAR	0.0047MF	5%	50V
C523	1-130-629-00	FILM	0.056MF	5%	50V
C524	1-130-629-00	FILM	0.056MF	5%	50V
C525	1-123-306-00	ELECT	47MF	20%	10V
C526	1-123-369-00	ELECT	4.7MF	20%	50V
C530	1-123-356-00	(FORMER)...	ELECT 10MF	20%	25V
C532	1-123-356-00	ELECT	10MF	20%	25V
C533	1-130-628-00	FILM	0.047MF	5%	50V
C534	1-130-628-00	FILM	0.047MF	5%	50V
♦CNP301	1-560-064-00	PIN, CONNECTOR 6P			
♦CNJ302	1-560-060-00	PIN, CONNECTOR 2P			
♦CNP303	1-560-064-00	PIN, CONNECTOR 6P			
♦CNP304	1-560-063-00	PIN, CONNECTOR 5P			
♦CNP305	1-561-965-00	SOCKET 5P (REMOTE)			
♦CNP501	1-560-062-00	PIN, CONNECTOR 4P			
♦CNP502	1-560-062-31	PIN, CONNECTOR 4P			
♦CNP503	1-560-064-21	PIN, CONNECTOR 6P			
♦CNP504	1-560-339-00	PIN, CONNECTOR 9P			
♦CNP506	1-560-708-00	PIN, CONNECTOR 2P			
♦CNP507	1-560-062-41	PIN, CONNECTOR 4P			
♦CNP508	1-560-708-00	PIN, CONNECTOR 2P			
CT101	1-141-225-21	CAP, TUNING, TRIMAR			
CT201	1-141-225-21	CAP, TUNING, TRIMAR			

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- All resistors are in ohms.
- F : nonflammable

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SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
D301	8-719-909-20	DIODE GL-9NG2
D302	8-719-909-20	DIODE GL-9NG2
D303	8-719-909-20	DIODE GL-9NG2
D304	8-719-909-20	DIODE GL-9NG2
D305	8-719-911-19	DIODE 1SS119
D306	8-719-911-19	DIODE 1SS119
D307	8-719-911-19	DIODE 1SS119
D308	8-719-911-19	DIODE 1SS119
D309	8-719-910-92	DIODE HZ9A2L
D310	8-719-911-19	DIODE 1SS119
D311 ⚠	8-719-901-42	DIODE HZ4B2
D312 ⚠	8-719-200-02	DIODE 10E-2
D313 ⚠	8-719-200-02	DIODE 10E-2
D314	8-719-200-02	DIODE 10E-2
D315	8-719-911-19	DIODE 1SS119
D316 ⚠	8-719-200-02	DIODE 10E-2
D317 ⚠	8-719-200-02	DIODE 10E-2
D318 ⚠	8-719-200-02	DIODE 10E-2
D319 ⚠	8-719-200-02	DIODE 10E-2
D501	8-719-911-19	DIODE 1SS119
D502	8-719-911-19	DIODE 1SS119
D504	8-719-911-19	DIODE 1SS119
D505	8-719-911-19	DIODE 1SS119
D506	8-719-911-19	DIODE 1SS119
D507	8-719-911-19	DIODE 1SS119
D508	8-719-911-19	DIODE 1SS119
D509	8-719-911-19	DIODE 1SS119
D510	8-719-911-19	DIODE 1SS119
D511	8-719-911-19	DIODE 1SS119
D513	8-719-911-19	DIODE 1SS119
D518	8-719-911-19	DIODE 1SS119
D519	8-719-911-19	DIODE 1SS119
D522	8-719-911-19	DIODE 1SS119
D523	8-719-911-19	DIODE 1SS119
D524	8-719-911-19	DIODE 1SS119
D525	8-719-934-05	DIODE SLR-34URC5
D526	8-719-902-77	DIODE SLR-34PC5
D527	8-719-902-77	DIODE SLR-34PC5
D528	8-719-902-77	DIODE SLR-34PC5
D529	8-719-902-78	DIODE SLR-34DC5
D530	8-719-911-19	(FORMER)...DIODE 1SS119
D531	8-719-911-19	(FORMER)...DIODE 1SS119
D533	8-719-911-19	DIODE 1SS119
D534	8-719-911-19	DIODE 1SS119
D535	8-719-911-19	(FORMER)...DIODE 1SS119

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D536	8-719-911-19	(FORMER)...DIODE 1SS119
D537	8-719-911-19	DIODE 1SS119
D538	8-719-200-02	DIODE 10E-2
FLT301	1-519-292-00	INDICATOR TUBE, FLUORESCENT
HE301	8-825-535-20	HEAD, ERASE (ES237-36)
HRP301	8-825-548-10	HEAD, R/P (PA242-3602)
IC101	8-752-002-70	IC CX20027
IC102	8-759-906-02	IC BA6146
IC201	8-752-002-80	IC CX20028
IC202	8-759-906-02	IC BA6146
IC301	8-759-101-56	IC CX10033A
IC302	8-759-101-55	IC CX10032A
IC303	8-759-700-47	IC CX10035
IC304	8-759-600-02	IC M5218L
IC501	8-759-201-82	(FORMER)...IC TC9310N-021
IC501	8-759-201-86	(NEW)...IC TC9310N-032
IC502	8-759-700-46	IC CX10034
IC504	8-759-201-84	IC TC9305P-003
IC505	8-759-201-83	(FORMER)...IC TC9310N-022
IC505	8-759-201-87	(NEW).....IC TC9310N-033
J101	1-507-762-00	JACK, PIN 4P (LINE IN/L)
J102	1-507-762-00	JACK, PIN 4P (LINE OUT/L)
J103	1-507-797-21	JACK, LARGE TYPE (MIC/L)
J201	1-507-762-00	JACK, PIN 4P (LINE IN/R)
J202	1-507-762-00	JACK, PIN 4P (LINE OUT/R)
J203	1-507-797-21	JACK, LARGE TYPE (MIC/R)
J301	1-507-796-21	JACK (HEADPHONES)
L101	1-408-930-00	MICRO INDUCTOR 33MMH
L102	1-408-256-00	MICRO INDUCTOR 8.2MMH
L103	1-408-262-00	MICRO INDUCTOR 27MMH
L201	1-408-930-00	MICRO INDUCTOR 33MMH
L202	1-408-256-00	MICRO INDUCTOR 8.2MMH
L203	1-408-262-00	MICRO INDUCTOR 27MMH
L301	1-407-177-XX	MICRO INDUCTOR 470UH
LPF101	1-231-388-31	FILTER, LOW PASS
LPF201	1-231-388-31	FILTER, LOW PASS
M501	1-541-201-00	MOTOR
PHI501	8-719-902-90	PHOTO INTERRUPTOR SPI201-20
PM1	1-454-316-00	SOLENOID, PLUNGER
PM2	1-454-316-00	SOLENOID, PLUNGER
PL301	1-518-509-00	LAMP, PILOT
PL302	1-518-510-00	LAMP, PILOT
⚠PT301	1-447-603-00	(US,Canadian)...TRANSFORMER, POWER
⚠PT301	1-447-604-00	(AEP,UK).....TRANSFORMER, POWER
⚠PT301	1-447-605-00	(E).....TRANSFORMER, POWER

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TC-FX505R

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E1 Model: 300,001 – 300,200	E1 Model: 300,201 and Later
E2 Model: 400,001 – 400,200	E2 Model: 400,201 and Later

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q101	8-729-245-83	TRANSISTOR 2SC2458
Q103	8-729-245-83	TRANSISTOR 2SC2458
Q104	8-729-100-13	TRANSISTOR 2SC2001
Q106	8-729-245-83	TRANSISTOR 2SC2458
Q107	8-729-245-83	TRANSISTOR 2SC2458
Q108	8-729-245-83	TRANSISTOR 2SC2458
Q109	8-729-245-83	TRANSISTOR 2SC2458
Q110	8-729-245-83	TRANSISTOR 2SC2458
Q111	8-729-245-83	TRANSISTOR 2SC2458
Q201	8-729-245-83	TRANSISTOR 2SC2458
Q203	8-729-245-83	TRANSISTOR 2SC2458
Q204	8-729-100-13	TRANSISTOR 2SC2001
Q206	8-729-245-83	TRANSISTOR 2SC2458
Q207	8-729-245-83	TRANSISTOR 2SC2458
Q208	8-729-245-83	TRANSISTOR 2SC2458
Q209	8-729-245-83	TRANSISTOR 2SC2458
Q210	8-729-245-83	TRANSISTOR 2SC2458
Q211	8-729-245-83	TRANSISTOR 2SC2458
Q301	8-729-204-83	TRANSISTOR 2SA1048-GR
Q302	8-729-194-57	TRANSISTOR 2SC945-P
Q303	8-729-194-57	TRANSISTOR 2SC945-P
Q304	8-729-194-57	TRANSISTOR 2SC945-P
Q305	8-729-204-83	TRANSISTOR 2SA1048-GR
Q306	8-729-245-83	TRANSISTOR 2SC2458
Q307	8-729-245-83	TRANSISTOR 2SC2458
Q308	8-729-180-93	TRANSISTOR 2SD809
Q309	8-729-180-93	TRANSISTOR 2SD809
Q310	8-729-180-93	TRANSISTOR 2SD809
Q311	8-729-173-13	TRANSISTOR 2SB731
Q313	8-729-245-83	TRANSISTOR 2SC2458
Q314	8-729-245-83	TRANSISTOR 2SC2458
Q315	8-729-245-83	TRANSISTOR 2SC2458
Q316	8-729-204-83	TRANSISTOR 2SA1048-GR
Q501	8-729-245-83	TRANSISTOR 2SC2458
Q502	8-729-245-83	TRANSISTOR 2SC2458
Q503	8-729-245-83	TRANSISTOR 2SC2458
Q506	8-729-204-83	TRANSISTOR 2SA1048-GR
Q508	8-729-204-83	TRANSISTOR 2SA1048-GR
Q510	8-729-245-83	TRANSISTOR 2SC2458
Q512	8-729-245-83	TRANSISTOR 2SC2458
Q514	8-729-245-83	TRANSISTOR 2SC2458
Q515	8-729-245-83	TRANSISTOR 2SC2458
Q516	8-729-245-83	TRANSISTOR 2SC2458
Q520	8-729-204-83	(FORMER)...TRANSISTOR 2SA1048-GR

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R101	1-246-481-00	CARBON	2.2K	5%	1/4W
R102	1-246-509-00	CARBON	33K	5%	1/4W
R103	1-247-879-00	CARBON	100K	5%	1/6W
R104	1-247-855-00	CARBON	10K	5%	1/6W
R105	1-247-855-00	CARBON	10K	5%	1/6W
R106	1-247-819-00	CARBON	330	5%	1/6W
R107	1-247-866-00	CARBON	30K	5%	1/6W
R108	1-246-521-00	CARBON	100K	5%	1/4W
R109	1-246-505-00	CARBON	22K	5%	1/4W
R110	1-246-491-00	CARBON	5.6K	5%	1/4W
R111	1-246-485-00	CARBON	3.3K	5%	1/4W
R112	1-246-521-00	CARBON	100K	5%	1/4W
R113	1-246-493-00	CARBON	6.8K	5%	1/4W
R114	1-246-506-00	CARBON	24K	5%	1/4W
R115	1-246-449-00	CARBON	100	5%	1/4W
R116	1-246-524-00	CARBON	130K	5%	1/4W
R117	1-246-491-00	CARBON	5.6K	5%	1/4W
R118	1-246-449-00	CARBON	100	5%	1/4W
R120	1-246-499-00	CARBON	12K	5%	1/4W
R121	1-246-503-00	CARBON	18K	5%	1/4W
R122	1-246-529-00	CARBON	220K	5%	1/4W
R123	1-247-831-00	CARBON	1K	5%	1/6W
R124	1-247-831-00	CARBON	1K	5%	1/6W
R125	1-246-473-00	CARBON	1K	5%	1/4W
R126	1-246-481-00	CARBON	2.2K	5%	1/4W
R127	1-246-472-00	CARBON	910	5%	1/4W
R128	1-246-484-00	CARBON	3K	5%	1/4W
R129	1-246-490-00	CARBON	5.1K	5%	1/4W
R130	1-246-507-00	CARBON	27K	5%	1/4W
R131	1-246-466-00	CARBON	510	5%	1/4W
R132	1-246-537-00	CARBON	470K	5%	1/4W
R133	1-214-776-00	METAL	91K	1%	1/4W
R134	1-246-513-00	CARBON	47K	5%	1/4W
R135	1-246-480-00	CARBON	2K	5%	1/4W
R136	1-246-490-00	CARBON	5.1K	5%	1/4W
R137	1-247-820-00	CARBON	360	5%	1/6W
R138	1-247-845-00	CARBON	3.9K	5%	1/6W
R139	1-247-833-00	CARBON	1.2K	5%	1/6W
R140	1-246-505-00	CARBON	22K	5%	1/4W
R143	1-246-474-00	CARBON	1.1K	5%	1/4W
R144	1-247-887-00	CARBON	220K	5%	1/6W
R145	1-247-886-00	CARBON	200K	5%	1/6W
R146	1-247-845-00	CARBON	3.9K	5%	1/6W
R147	1-247-887-00	CARBON	220K	5%	1/6W
R148	1-247-886-00	CARBON	200K	5%	1/6W

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ELECTRICAL PARTS

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R149	1-246-497-00	CARBON	10K	5%	1/4W
R150	1-246-497-00	CARBON	10K	5%	1/4W
R151	1-246-489-00	CARBON	4.7K	5%	1/4W
R152	1-246-493-00	CARBON	6.8K	5%	1/4W
R153	1-246-497-00	CARBON	10K	5%	1/4W
R154	1-247-831-00	CARBON	1K	5%	1/6W
R155	1-246-521-00	CARBON	100K	5%	1/4W
R161	1-246-501-00	CARBON	15K	5%	1/4W
R163	1-247-807-00	CARBON	100	5%	1/6W
R164	1-247-842-00	CARBON	3K	5%	1/6W
R166	1-247-863-00	CARBON	22K	5%	1/6W
R167	1-247-857-00	CARBON	12K	5%	1/6W
R169	1-247-855-00	CARBON	10K	5%	1/6W
R170	1-247-849-00	CARBON	5.6K	5%	1/6W
R171	1-247-863-00	CARBON	22K	5%	1/6W
R172	1-247-837-00	CARBON	1.8K	5%	1/6W
R174	1-247-863-00	CARBON	22K	5%	1/6W
R175	1-247-851-00	CARBON	6.8K	5%	1/6W
R176	1-247-845-00	CARBON	3.9K	5%	1/6W
R178	1-247-823-00	CARBON	470	5%	1/6W
R179	1-247-863-00	CARBON	22K	5%	1/6W
R180	1-247-855-00	CARBON	10K	5%	1/6W
R181	1-247-855-00	CARBON	10K	5%	1/6W
R182	1-247-843-00	CARBON	3.3K	5%	1/6W
R183	1-247-855-00	CARBON	10K	5%	1/6W
R184	1-247-879-00	CARBON	100K	5%	1/6W
R185	1-247-823-00	CARBON	470	5%	1/6W
R188	1-247-888-00	CARBON	240K	5%	1/6W
R189	1-247-855-00	CARBON	10K	5%	1/6W
R191	1-247-863-00	CARBON	22K	5%	1/6W
R192	1-247-807-00	CARBON	100	5%	1/6W
R301	1-246-461-00	CARBON	330	5%	1/4W
R302	1-247-887-00	CARBON	220K	5%	1/6W
R303	1-247-855-00	CARBON	10K	5%	1/6W
R304	1-246-457-00	CARBON	220	5%	1/4W
R305	1-246-457-00	CARBON	220	5%	1/4W
R306	1-247-847-00	CARBON	4.7K	5%	1/6W
R307	1-247-831-00	CARBON	1K	5%	1/6W
R308	1-247-879-00	CARBON	100K	5%	1/6W
R309	1-247-871-00	CARBON	47K	5%	1/6W
R310	1-247-879-00	CARBON	100K	5%	1/6W
R311	1-247-847-00	CARBON	4.7K	5%	1/6W
R312	1-247-863-00	CARBON	22K	5%	1/6W
R313	1-247-863-00	CARBON	22K	5%	1/6W
R314 ⚠	1-217-524-00	FUSIBLE	12	5%	1/4W F

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R315	1-247-865-00	CARBON	27K	5%	1/6W
R316	1-247-865-00	CARBON	27K	5%	1/6W
R317	1-247-855-00	CARBON	10K	5%	1/6W
R318	1-247-871-00	CARBON	47K	5%	1/6W
R319	1-247-853-00	CARBON	8.2K	5%	1/6W
R320	1-247-845-00	CARBON	3.9K	5%	1/6W
R321	1-247-838-00	CARBON	2K	5%	1/6W
R322	1-247-843-00	CARBON	3.3K	5%	1/6W
R323	1-247-813-00	CARBON	180	5%	1/6W
R324	1-247-855-00	CARBON	10K	5%	1/6W
R325	1-247-847-00	CARBON	4.7K	5%	1/6W
R326	1-247-855-00	CARBON	10K	5%	1/6W
R327	1-247-847-00	CARBON	4.7K	5%	1/6W
R328	1-247-842-00	CARBON	3K	5%	1/6W
R329	1-247-829-00	CARBON	820	5%	1/6W
R330	1-247-826-00	CARBON	620	5%	1/6W
R331	1-247-847-00	CARBON	4.7K	5%	1/6W
R332	1-246-500-00	CARBON	13K	5%	1/4W
R333	1-246-482-00	CARBON	2.4K	5%	1/4W
R334	1-246-482-00	CARBON	2.4K	5%	1/4W
R335	1-246-501-00	CARBON	15K	5%	1/4W
R336	1-246-473-00	CARBON	1K	5%	1/4W
R338	1-247-807-00	CARBON	100	5%	1/6W
R350 ⚠	1-217-523-00	FUSIBLE	10	5%	1/4W F
R351	1-246-497-00	CARBON	10K	5%	1/4W
R501	1-247-839-00	CARBON	2.2K	5%	1/6W
R502	1-247-903-00	CARBON	1M	5%	1/6W
R503	1-247-839-00	CARBON	2.2K	5%	1/6W
R504	1-247-903-00	CARBON	1M	5%	1/6W
R507	1-247-847-00	CARBON	4.7K	5%	1/6W
R508	1-247-879-00	CARBON	100K	5%	1/6W
R509	1-247-863-00	CARBON	22K	5%	1/6W
R510	1-247-863-00	CARBON	22K	5%	1/6W
R511	1-247-863-00	CARBON	22K	5%	1/6W
R512	1-247-879-00	CARBON	100K	5%	1/6W
R513	1-247-863-00	CARBON	22K	5%	1/6W
R514	1-247-811-00	CARBON	150	5%	1/6W
R515	1-247-811-00	CARBON	150	5%	1/6W
R516	1-247-819-00	CARBON	330	5%	1/6W
R517	1-247-827-00	CARBON	680	5%	1/6W
R518	1-247-811-00	CARBON	150	5%	1/6W
R522	1-247-872-00	CARBON	51K	5%	1/6W
R524	1-247-879-00	CARBON	100K	5%	1/6W
R525	1-247-855-00	CARBON	10K	5%	1/6W
R526	1-247-855-00	CARBON	10K	5%	1/6W
R527	1-247-819-00	CARBON	330	5%	1/6W

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CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

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Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

TC-FX505R

FORMER TYPE SERIAL NO.	NEW TYPE SERIAL NO.
US Model: 800,001 — 808,700	US Model: 808,701 and Later
Canadian Model: 700,001 — 701,400	Canadian Model: 701,401 and Later
AEP Model: 500,001 — 502,400	AEP Model: 502,401 and Later
UK Model: Not Produced	UK Model: 600,001 and Later
E1 Model: 300,001 — 300,200	E1 Model: 300,201 and Later
E2 Model: 400,001 — 400,200	E2 Model: 400,201 and Later

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R529	1-247-831-00	CARBON	1K	5%	1/6W
R530	1-247-831-00	CARBON	1K	5%	1/6W
R531	1-247-831-00	CARBON	1K	5%	1/6W
R532	1-247-831-00	CARBON	1K	5%	1/6W
R533	1-247-831-00	CARBON	1K	5%	1/6W
R534	1-247-831-00	CARBON	1K	5%	1/6W
R535	1-247-831-00	CARBON	1K	5%	1/6W
R537	1-247-831-00	CARBON	1K	5%	1/6W
R538	1-247-847-00	CARBON	4.7K	5%	1/6W
R539	1-247-855-00	CARBON	10K	5%	1/6W
R540	1-247-839-00	CARBON	2.2K	5%	1/6W
R541	1-247-868-00	CARBON	36K	5%	1/6W
R542	1-247-879-00	CARBON	100K	5%	1/6W
R543	1-247-809-00	CARBON	120	5%	1/6W
R546	1-247-889-00	CARBON	270K	5%	1/6W
R547	1-247-887-00	CARBON	220K	5%	1/6W
R548	1-247-875-00	CARBON	68K	5%	1/6W
R551	1-247-871-00	CARBON	47K	5%	1/6W
R553	1-247-841-00	CARBON	2.7K	5%	1/6W
R554	1-247-841-00	CARBON	2.7K	5%	1/6W
R555	1-247-831-00	CARBON	1K	5%	1/6W
R556	1-247-872-00	CARBON	51K	5%	1/6W
R562	1-247-879-00	CARBON	100K	5%	1/6W
R563	1-247-879-00	CARBON	100K	5%	1/6W
R566	1-247-871-00	CARBON	47K	5%	1/6W
R568	1-247-863-00	CARBON	22K	5%	1/6W
R569	1-247-855-00	CARBON	10K	5%	1/6W
R570	1-247-821-00	(FORMER)...CARBON	390	5%	1/6W
R572	1-247-807-00	CARBON	100	5%	1/6W
R573	1-247-831-00	CARBON	1K	5%	1/6W
R574	1-247-847-00	(FORMER)...CARBON	4.7K	5%	1/6W
R575	1-247-855-00	(FORMER)...CARBON	10K	5%	1/6W
RV101	1-226-991-00	RES, VAR, SLIDE 20K/20K (REC LEVEL)			
RV102	1-226-236-00	RES, ADJ, CARBON 10K			
RV103	1-226-851-41	RES, ADJ, CARBON 10K			
RV104	1-226-236-00	RES, ADJ, CARBON 10K			
RV201	1-226-991-00	RES, VAR, SLIDE 20K/20K (REC LEVEL)			
RV202	1-226-236-00	RES, ADJ, CARBON 10K			
RV203	1-226-851-41	RES, ADJ, CARBON 10K			
RV204	1-226-236-00	RES, ADJ, CARBON 10K			
RY301	1-515-473-00	RELAY			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
S301	1-554-510-00	SWITCH, PUSH (3 KEY) (TAPE SELECT, DOLBY NR)
S302	1-554-510-00	SWITCH, PUSH (3 KEY) (DIRECTION MODE,MUSIC SCAN/BLANK SKIP)
S303	1-554-208-00	SWITCH, SLIDE (TIMER)
S304 ⚠	1-553-318-00	SWITCH, PUSH (POWER)
S501	1-554-303-00	SWITCH, KEY BOARD, FAST-REV
S502	1-554-303-00	SWITCH, KEY BOARD, STOP
S503	1-554-303-00	SWITCH, KEY BOARD, FWD
S504	1-554-303-00	SWITCH, KEY BOARD, FF
S505	1-554-303-00	SWITCH, KEY BOARD, REV
S506	1-554-303-00	SWITCH, KEY BOARD, REC
S507	1-554-303-00	SWITCH, KEY BOARD, PAUSE
S508	1-554-303-00	SWITCH, KEY BOARD, REC MUTE
S509	1-554-303-00	SWITCH, KEY BOARD, AMS
S551	1-554-205-00	SWITCH, PUSH, EJECT
S552	1-554-205-00	SWITCH, PUSH, ERASE PROOF
S553	1-554-205-00	SWITCH, PUSH, TAPE SELECT
S554	1-554-205-00	SWITCH, PUSH, TAPE SELECT
SSF101	1-235-186-00	ENCAPSULATED COMPONENT
SSF201	1-235-186-00	ENCAPSULATED COMPONENT
T301	1-433-257-00	TRANSFORMER, BIAS OSCILLATOR
⚠VS301	1-526-576-51	(E)...SELECTOR, POWER VOLTAGE

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